

JPRS-CAG-85-027

12 September 1985

China Report

AGRICULTURE



FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

12 September 1985

CHINA REPORT

AGRICULTURE

CONTENTS

PEOPLE'S REPUBLIC OF CHINA

NATIONAL

| | |
|---|----|
| PRC Farmland Declines in Quantity, Quality (CHINA DAILY, 11 Jul 85)..... | 1 |
| Concerns Expressed Over Deteriorating Land Quality (Xu Zhikang; ANHUI RIBAO, 22 Jun 85)..... | 4 |
| Further Discussion of Land Utilization (Editorial; NONGMIN RIBAO, 12 Jul 85)..... | 11 |
| Problems, Prospects for China's Rural Economy (Yan Zelong; NONGYE JINGJI WENTI, No 5, May 85)..... | 13 |
| Paper Reports Delay in Major Yangtze Flood Control Project (CHINA DAILY, 31 Jul 85)..... | 22 |
| Ideas for Farm Produce Price Liberalization Explained (Hu Xianshi; NONGMIN RIBAO, 9 Jul 85)..... | 24 |
| Meat, Milk, Egg Production Up in Jan-Jun (XINHUA, 12 Aug 85)..... | 28 |
| Peasant Research Associations Flourish (XINHUA, 15 Aug 85)..... | 29 |
| Widespread Development of Market Towns Urged (Ren Qingyao; JINGJI DILI, No 2, May 85)..... | 31 |
| How To Acquire More Capital for Rural Enterprises Explored (NONGMIN RIBAO, 10 Jul 85)..... | 40 |

| | |
|--|----|
| Exhortation To Find More Work Opportunities for Peasants (Editorial; NONGMIN RIBAO, 15 Jul 85)..... | 42 |
| Direction of Hybrid Rice Growing Outlined (NONGMIN RIBAO, 15 Jul 85)..... | 44 |
| State Council Regulations on Water Charges (XINHUA Domestic Service, 30 Jul 85)..... | 46 |
| Development of Commodity Grain Bases Urged (Kuang Chanjuan, Xue Zhishi; NONGYE JISHU JINGJI, No 5, May 85)..... | 52 |
| Program Outlined for Constructing Livestock Feed Industry (Yu Yefan; JINGJIXUE ZHOUBAO, 9 Jun 85)..... | 59 |
| National Feed Industry Development Plan for 1984-2000 (NONGYE GONGCHENG, No 3, 5 Jun 85)..... | 61 |
| Emphasize Feed Industry, Promote Grain Conversion (Li Fuxing, Zhang Guocheng; NONGYE GONGCHENG, No 3, 5 Jun 85)..... | 63 |
| Improving Agricultural Transportation (NONGJIHUA FUWU BAO, 4 Mar 85)..... | 69 |
| Tractor Sales in PRC Plunge Due to Credit Squeeze (Zhu Ling; CHINA DAILY, 8 Aug 85)..... | 71 |
| Growth of Agricultural Mechanization (NONGJIHUA FUWU BAO, 4 Mar 85)..... | 74 |
| RENMIN RIBAO on Fish, Seafood Production (XINHUA, 14 Aug 85)..... | 76 |
| Briefs Record Sugar Output..... | 77 |
| TRANSPROVINCIAL AFFAIRS | |
| Reforestation Results in Inner Mongolia, Heilongjiang (XINHUA, 10 Aug 85)..... | 78 |
| ANHUI | |
| Anhui Afforestation Campaign Make Progress (XINHUA, 3 Aug 85)..... | 79 |

| | |
|---|----------|
| Anhui Opens Agricultural Information Center (XINHUA, 1 Aug 85)..... | 80 |
| Substantial Rise in Rapeseed Output (Kong Xiangying; ANHUI RIBAO, 13 Jul 85)..... | 81 |
| BEIJING | |
| Beijing Winning Battle Against Dust Storms (XINHUA, 2 Aug 85)..... | 82 |
| Managing Households Specializing in Transportation, Sales (ZHUANYEHUA JINGYING BAO, 23 Feb 85)..... | 83 |
| Ideas for Improving Forestry Specialized Households (ZHUANYEHUA JINGYING BAO, 2 Mar 85)..... | 85 |
| How To Improve Commercial Services Households (ZHUANYEHUA JINGYING BAO, 9 Mar 85)..... | 87 |
| GUANGDONG | |
| Guangdong Boosts Production of Non-Staple Foods (XINHUA, 4 Aug 85)..... | 89 |
| GUIZHOU | |
| Briefs Guizhou Grassland Acreage | 90 |
| HEBEI | |
| Farm Machinery Sales Continue Upward Growth (Duan Shaotang; NONGJIHUA FUWU BAO, 4 Mar 85)..... | 91 |
| Briefs Corn Shortage Hemp Shortage | 93 93 |
| HEILONGJIANG | |
| Briefs Heilongjiang Soybean Factory | 94 |
| HUNAN | |
| Restructuring Rural Economy for Domestic, External Markets (Luo Guangfu; NONGYE JISHU JINGJI, No 5, May 85)..... | 95 |

JIANGSU

- Jiangsu Buys More Summer Grain From Peasants
(XINHUA, 10 Aug 85)..... 102

JILIN

- Jilin Plans To Exploit Grain, Timber, Other Resources
(CHINA DAILY, 11 Aug 85)..... 103

NEI MONGGOL

- Improved Methods Increase Nei Monggol Livestock
(XINHUA, 11 Aug 85)..... 105

NINGXIA

- General Improvement in Livestock Production Reported
(Chen Qinghui; NINGXIA RIBAO, 3 Jul 85)..... 106
- Decline in Pork Sales Explored
(Qu Shangji; NINGXIA RIBAO, 11 Jul 85)..... 108
- Improvement of Farm Mechanization Management Urged
(Feng Longjiang; NINGXIA RIBAO, 9 Jul 85)..... 110

QINGHAI

- Briefs
Stock Survival Rate..... 113

SHANGHAI

- Shanghai Plans Major Water Pollution Control Project
(Su Zhen; CHINA DAILY, 8 Aug 85)..... 114
- Briefs
Shanghai-Rotterdam Technical Cooperation..... 116

SHANXI

- Comprehensive Reform of County-Level Economy Discussed
(Chen Hanfeng, Sun Xiyun; JINGJI WENTI, No 10, 25 Oct 85). 117

SICHUAN

- Price Rise for Silk, Improvements in Silk Industry Urged
(Du Yuxiang; SICHUAN RIBAO, 13 Jun 85)..... 125

| | |
|--|-----|
| State Rapeseed Procurement Moving Along (SICHUAN RIBAO, 10 Jul 85)..... | 127 |
| Accelerate Movement to Warehouses, by Tao Meizhuan | 127 |
| State Purchase of All Surplus Rapeseed | 128 |
| TIANJIN | |
| Briefs | |
| Tianjin Wheat Harvest | 129 |
| XINJIANG | |
| Xinjiang Peasants Developing Fishery Industry (XINHUA, 26 Jul 85)..... | 130 |
| XIZANG | |
| XIZANG Official Reports on Research Institutes (XINHUA, 30 Jul 85)..... | 131 |
| Briefs | |
| Xizang Grassland Survey | 132 |
| YUNNAN | |
| Meeting Discusses Spring Crop Production (Yunnan Provincial Service, 4 Aug 85)..... | 133 |

ABSTRACTS

AGROMETEOROLOGY

| | |
|--|-----|
| DILI YANJIU [GEOGRAPHICAL RESEARCH], No 2, Jun 85..... | 135 |
|--|-----|

PALEOGRAPHY

| | |
|---|-----|
| DILI YANJIU [GEOGRAPHICAL RESEARCH] No 2, Jun 85..... | 136 |
|---|-----|

NATIONAL

PRC FARMLAND DECLINES IN QUANTITY, QUALITY

HK110333 Beijing CHINA DAILY in English 11 Jul 85 p 4

[Text] The quantity and the quality of cultivated land have direct influence upon a nation's economic development. For a country like China with more people than elsewhere but limited land under cultivation, the contradiction between people and land becomes more serious as the population increases. Since 1949 the quantity of China's cultivated land has decreased and its quality has gone down. This situation may hamper efforts to quadruple the industrial and agricultural output by the year 2000. This is the view expressed by a signed article in ECONOMIC INFORMATION.

According to statistics, between 1957 and 1983, China's cultivated land decreased by 200 million (15 mu equals one hectare) with an average decrease of 8 million mu each year.

Combined with the increase in population, the result is that per capita share of cultivated land dropped from 2.59 mu in 1959 to 1.45 mu in 1983, a decrease of 44 percent in 25 years. The problem is especially serious in China's eastern plains and the coastal, urban and suburban areas where industry is centralized. For example, in the areas between Beijing and Tianjin, cultivated land decreased by 6.46 million mu, about a quarter of the total once cultivated in this area.

Reasons for the decrease include capital construction, irrigation systems, roads and increased housing. Nationally these developments take away about 12 million of cultivated land annually.

Out of Balance

After the introduction of the responsibility system in the countryside, farmers have become better off. More houses and educational and recreational centres have been built, which take a considerable amount of arable land. It is reported that in 1984 alone, Sichuan, Hubei and Shaanxi provinces lost 3.41 million mu of cultivated land mainly to farmers' housing. Shanghai suburban areas lost four times more cultivated land in 1984 than in 1983.

Along with the decrease of cultivated land, land quality is also going down for several reasons. There is not a good balance between the utilization and

the maintenance of cultivated land. Crops needing much water and fertilizer, such as rice, wheat and corn, have been developing greatly. There is little crop variety. Continuous planting is rampant. This detracts from soil fertility, because there is no time for soil recovery or maintenance. Organic fertilizer, leguminous plants and green manure fertilizer are lacking. A lot of straw is not being returned to the fields, resulting in insufficient organic substance and a decline in fertility. A land survey in 893 counties throughout China showed organic nutrients were lacking in about 60 percent of the land. Insufficient fertility of cultivated land is a common problem existing all over China.

A great amount of cultivated land is either salinized or sandy.

China has about 100 million mu of cultivated land which has been salinized. At present, half of this has been improved, but the bad situation might reoccur because of poor irrigation and management. In Inner Mongolia the amount of salinized soil has increased from 450,000 mu in the mid-1950s to 3.19 million mu now.

In the past 15 years sandy soil areas throughout China increased by 40 million mu because of wood-cutting, denudation, improper reclamation and excessive herd grazing.

Erosion Expands

Areas suffering water loss and soil erosion have expanded from 1.16 million square kilometres in the 1950s to 1.5 million square kilometres now. This is mainly in the areas of Loess Plateau and South China's hilly areas. Soil erosion is most serious on the Loess Plateau, which annually loses 5,000 to 30,000 tons of water or land in a square kilometre. The reasons for this are long-term improper utilization of land followed by excessive reclamation efforts, denudation, wood-cutting and grazing, resulting in the destruction of top-soil.

Polluted areas also have expanded. Of the 1.49 billion mu of cultivated land in China, polluted areas cover about 19.4 million mu. Among them, areas polluted by foul water account for 46 percent, waste gasses 51.6 percent, and waste residue 2.1 percent. Every day, China produces about 100 million tons of polluted water and 90 percent of it flows directly into rivers, lakes and oceans without going through any treatment. In Beijing, Tianjin and Shanghai, polluted land totals about 3.87 million mu which makes up about one-fifth of the cultivated land of these cities.

To properly protect and manage the cultivated land, prevent the unnecessary decrease in area and raise its quality, several measures have been suggested. These include:

--Gaining better knowledge of how much cultivated land there is, and evaluate its quality.

--Tightening control over construction on cultivated land. Old houses can be modernized while new high-rise buildings are recommended. If possible, underground areas should be used.

--Keeping new industrial development in big cities to the outskirts, wasteland and land of poor agricultural quality.

--Setting up a system of scientific cultivation, crop rotation and fertilization.

--Working to prevent loss of water and soil erosion by combining cultivation, biological and engineering measures and treating waste to prevent farmland from being polluted.

CSO: 4020/310-F

NATIONAL

CONCERNS EXPRESSED OVER DETERIORATING LAND QUALITY

Hefei ANHUI RIBAO in Chinese 22 Jun 85 p 3

[Article by Xu Zhikang [1776 1807 1660], Geography Institute, Chinese Academy of Sciences: "Treasuring Every Inch of Cultivated Land To benefit Future Generations"; originally published in JINGJI CANKAO [ECONOMIC REFERENCE]]

[Text] Cultivated land is the cream of land, and it is also the foundation for the growing of grain, cotton, oil-bearing crops, vegetables and other agricultural and sideline products. The amount of cultivated land and its fertility have a direct influence on development of the national economy, and a bearing on the magnificent goal of quadrupling the gross output value of industry and agriculture by the year 2000. China has a large population relative to available land, and as population increases the conflict between the population and the land will become increasingly acute. Consequently, it is necessary to cherish completely and fully and rationally use every inch of land. During the more than 30 years since the founding of the People's Republic, however, the sharp decline in the amount of cultivated land and the decline in its quality has become an extraordinarily urgent problem that should arouse a high degree of serious concern to take vigorous action to protect cultivated land genuinely and effectively.

I. Annual Decline of 8 Million Mu of Fine Farmland

The large decline and the speed of decline in the cultivated land area are extremely frightening. Analysis of statistics shows that from 1957 through 1983, China had a net decrease of 200 million mu of cultivated land. The average annual net decrease of 8 million mu of fine farmland has made China the country with the greatest decline in cultivated land area in the world. Simultaneous with decline in the absolute amount of cultivated land has been a rise in population so that the relative amount of cultivated land per capita has declined tremendously. In 1957, the amount of cultivated land for the country as a whole averaged 2.59 mu per capita. By 1983, the amount had declined to 1.43 mu (see figure). During a 25-year period, the average amount of cultivated land per capita for the country as a whole declined 44 percent. At this speed of decline, an additional decline of 136 million mu will occur by 2000. If the approximately 100 million mu of steep slopes in mountain regions and the desertified land of the northwest that is being withdrawn from agriculture for reversion to forests is also taken into consideration, the decline in the amount of cultivated land will come to 236 million mu. If during this period the total of all wasteland that can be reclaimed for

the growing of farm crops is reclaimed for farmland, the net gain in cultivated land will be only about 100 million mu at best. The fine-quality cultivated land of China's eastern plains areas and the suburbs of cities and towns along the seacoast in which industry is concentrated has declined fastest. In the Beijing-Tianjin corridor, for example, from 1952 through 1983 cultivated land declined by 6,464,000 mu. This was more than one-fourth the total cultivated land area of this region. The average speed of decline was 0.82 percent per year, and the speed of decline of cultivated land per capita was 4.7 percent.

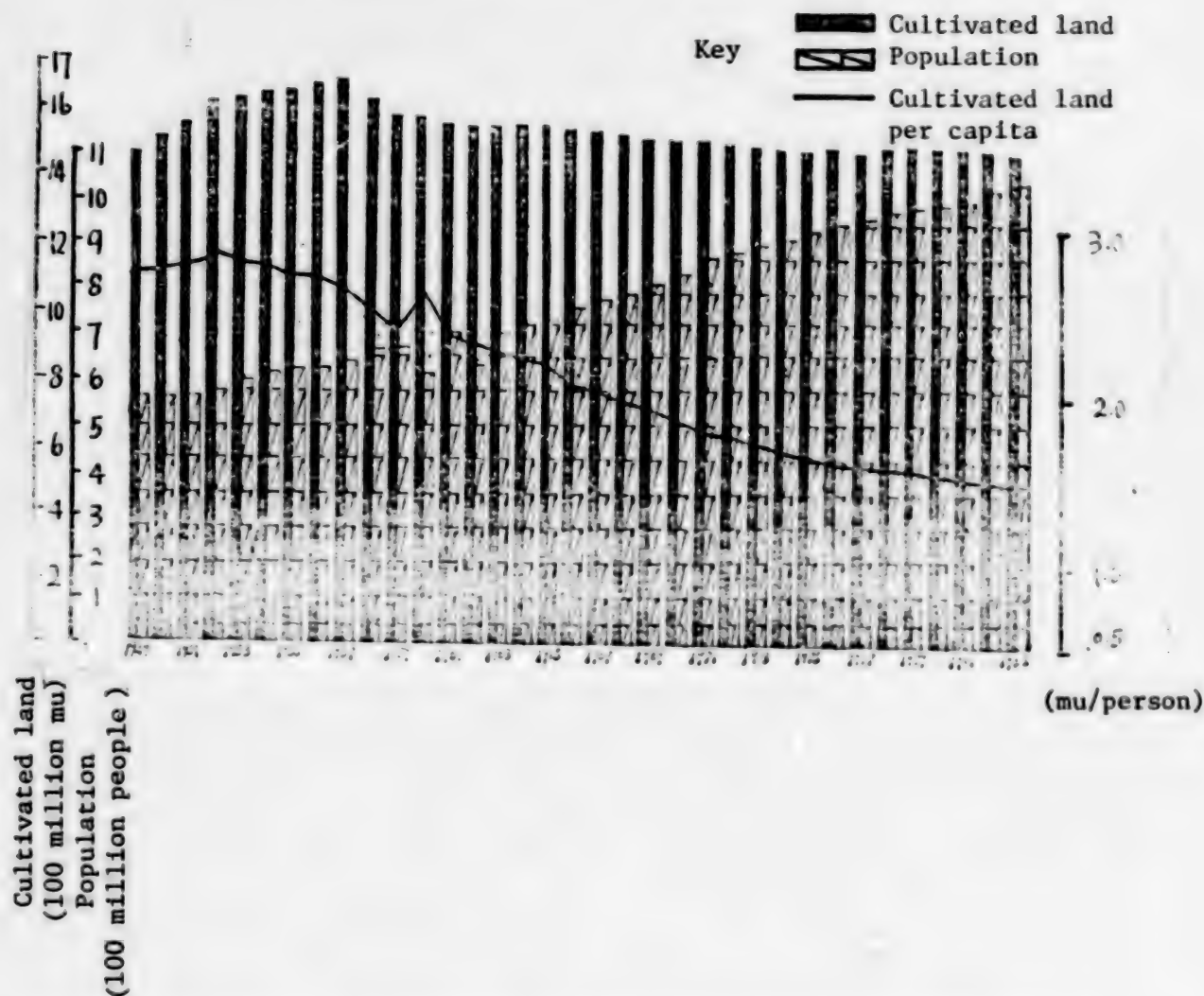
Main reasons for decline in the amount of cultivated land are as follows: National capital construction, farmland water conservancy construction, road construction, commune and brigade capital construction as well as commune member home construction all consumed land. The amount of cultivated land taken over in the country as a whole averaged somewhat more than 12 million mu per year. Development of these endeavors naturally required a certain amount of cultivated land; however, because of a lack of centralized land management or insufficiently strict management, much less a centralized overall plan for land use in some areas, some units and departments took over land indiscriminately and misused it, and much land was wasted as a result of less being used than had been reported or not being used after having been taken over. In recent years, in particular, as rural institution of responsibility fields stimulated large development of agricultural production and peasants began to take the road to riches, large-scale building of rural dwellings, commune and brigade enterprises and village and town cultural and welfare facilities has taken up a large amount of cultivated land. Reportedly in the three provinces of Sichuan, Hubei, and Shanxi, cultivated land decreased by 3.41 million mu in 1984 alone. As of 1980, commune and brigade enterprises in suburban Tianjin had taken over more than 60,000 mu of land. In Shanghai, the amount of land taken over for rural home construction and rural and small town enterprises increased tremendously. Commune member home construction increased from the average 2,000 mu per year of the previous several years to approximately 10,000 mu during the past several years, and land taken over by village and town enterprises in 1984 increased nearly fourfold over 1983, becoming the main reason for the decline of cultivated land in suburban Shanghai.

II. Decline in Quality of Cultivated Land

Decline in cultivated land quality is reflected principally in the following ways:

First is rather poor linking of use and nurture of cultivated land, the farming of vast areas for meager harvest being rather widespread. Since the founding of the People's Republic, the cultivated land multiple cropping index has risen rapidly everywhere. The expansion in growing area for crops requiring a fairly large amount of water and fertilizer such as paddy rice, wheat and corn, the lack of crop diversification, and the fairly universal practice of continuous growing of the same crops has caused a relatively serious depletion of soil fertility, and the soil is unable to rest and rebuild. Organic fertilizer is

Figure Showing Expansion of Cultivated Land
and Population Since founding of the
People's Republic



insufficient; there is a shortage of crops that nurture the soil such as pulses and green manure, and large quantities of plant stalks and stems cannot be returned to the fields, such that the soil's organic matter is not replenished. This leads to a deterioration of soil fertility and a change for the worse in the soil's chemical and physical properties. Pertinent data show a 60 to 80 percent decline in organic matter over a 30-year period in the cropland of the desertified area of north China where farming and livestock raising intermingle. Statistics from 893 counties throughout the country where a general soil survey was conducted (670 million mu of cultivated land) showed 86 percent of the cultivated land area to be nitrate deficient, 33.2 percent of the land to be producing low yields, and 26.6 percent of the land to have a thin cultivated layer. Insufficient fertility of cultivated land is a conspicuous problem that exists universally throughout the country.

Second is expansion of the salinized and desertified cultivated land area. Half of the country's approximately 100 million mu of saline and alkaline land is currently in need of improvement, and as a result of improper irrigation and management, land that has already been improved may revert. This is particularly true of some areas where improper measures are used, heavy irrigation and slight drainage having created an expansion in the salinized cultivated land area. Such is the case in the irrigated area at the bend of the Yellow River in Cuba League in Nei Monggol. During the period immediately following the founding of the People's Republic, this area had a 470,000 mu salinized land area, which has recently increased to 3.19 million mu, a sevenfold increase. In the irrigated area of the Mote Plain where water is lifted from the Yellow River, the salinized land area covers 85 percent of the irrigated area. During the past 15 years, the desertified area for the country as a whole has increased to 40,500 mu. This has resulted principally from the gathering of firewood, reckless cutting of timber, senseless clearing of land for agriculture, and overgrazing.

Third is serious soil erosion. The eroded area of the country has expanded from the 1.16 million square kilometers of the period immediately following the founding of the People's Republic to 1.5 million square kilometers, a 29.3 percent increase. Runoff of topsoil reaches 5 billion tons per year, which is equivalent to a runoff of fertile topsoil to a depth of 1 centimeter per year from all the cultivated land in the country. Erosion is greatest in the loess highlands, the hill region south of the Yangtze River, the earth and stone mountain areas of North China, and the black soil region of Northeast China. Erosion in the loess highlands is on a scale rarely encountered elsewhere in the world. The erosion modulus runs from 5,000 to 10,000 tons per square kilometer, and is 30,000 tons per square kilometer at its most serious. Measurements taken at the Sanmenxia Hydrology Station show silt carried by the Yellow River to have broken the 2-billion-ton mark in 1977, up 40 percent from the period immediately following the founding of the People's Republic. In recent years soil erosion has become more serious in all of the provinces and regions of south China as well. In Jiangxi Province, for example, the eroded area was 6 percent of the land area during the 1950's; today it is 23 percent. Soil erosion results largely from irrational use of the land over a long period of time, reckless reclamation of land for agriculture, reckless felling of trees, reckless collection of firewood, and reckless grazing that leads to serious damage to the vegetation cover.

Fourth is an increase in the polluted area. Statistics from departments concerned for 1981 show an approximately 19.4-million-mu area of total cultivated land as polluted by the "three wastes." This includes 46.3 percent polluted by waste water, 51.6 percent by waste gas, and 2.1 percent by a buildup of industrial residues. The amount of polluted water discharged throughout the country averages approximately 100 million tons daily, 90 percent of which has not been processed or not very well processed, i.e., discharged into rivers, lakes and the ocean causing the pollution of a large land area. In the cities of Beijing, Tianjin and Shanghai alone, the land area suffering from varying degrees of pollution amounts to 3,875,000 mu, or about one-fifth of the total cultivated land area of the three cities.

III. We Must Treasure and Protect Cultivated Land

In order to strengthen protection and control of cultivated land resources, guard against unnecessary reduction and waste of the cultivated land area, improve the quality of cultivated land and make fullest use of its production potential, the following actions should be taken:

1. Make a complete survey of cultivated land and improve management of it: Everyone is aware that the quantity of China's cultivated land resources is not clear and its quality is uncertain. Yet, a clear and unambiguous knowledge of the quantity and quality of cultivated land is the scientific basis for formulating national economic plans for development of agricultural production, and it is also the basis for exploiting, using, protecting, and improving cultivated land. This is a task to which major efforts should be devoted and much energy expended, with relevant academic disciplines and departments organized for cooperation. A combination of advanced scientific skills and techniques such as remote sensing plus traditional measuring methods should be used for the earliest possible survey of the quantity and quality of cultivated land. In order to manage and use cultivated land well, simultaneous with these efforts should be the establishment and perfection of a centralized soil management system at every level of government from top to bottom. This is a key action for the institution of scientific management of the soil and for applying results of the soil survey. Centralized soil management institutions should be used to carry out land registration, to compile land statistics regularly, to study changes in land use, to assess quality and make economic evaluations of the soil, to do overall planning of land utilization, and to provide overall coordination of problems in the use of land by various sectors and disputes over land. Priorities for land use and a rigorous system of requests, approval of requests, and transfers should be established to prevent arbitrary takeovers, reckless use and illegal resale for profit of land. Economic, legal, and administrative actions may also be applied to strengthen control over land.

2. Strict control over the seizing of cultivated land for capital construction and for building of cities, towns, villages and hamlets: City and town construction should be linked to renovation and the tapping of potential. There should be planned renovation of old houses, dangerous houses that have become dilapidated through long years of disrepair, and dwellings in compounds, gradual rebuilding of single-storey houses into multi-storey houses, and going underground with construction where conditions permit. New industries in large cities should do everything possible to locate in the distant suburbs and should, insofar as possible, use wasteland, flats along water, inferior land, and hillsides to build. They should use little or no cultivated land, and they should strictly control the taking over of vegetable fields and high-yield grain and cotton land. In the building of rural market towns and residential sites, general methods should be suited to specific situations for centralized planning. All types of land should be zoned according to function and the scope of land use designated. When commune members build houses, they should renovate old villages and towns for the most part, be encouraged to build multi-storey houses, and do everything possible to build upward, mostly tapping potential in ways other than spreading out.

3. Establishment of a scientific farming and crop rotation system, and a system of fertilization: Scientific farming methods and rational crop rotation should be used for suitable expansion of the area planted to crops that nurture the soil and green manure. Full use should be made of agricultural and sideline products to develop animal husbandry for a linking of farming and livestock raising to increase the amount of organic fertilizer. The antiquated method of using biological energy should be discontinued and vigorous efforts made to expand use of methane and methane gas fertilizer. In addition, both organic and inorganic fertilizer should be used to increase soil fertility and improve the soil's chemical and physical properties so that the quality of cultivated land will rise steadily.

4. Serious attention to and intensification of cultivated land restoration: A large amount of cultivated land throughout the country has been taken over for mining, the manufacture of bricks and tiles, the quarrying of stone and the digging of sand, and land has been removed for the building of rural houses. Active measures should be taken to organize the launching of work to restore this cultivated land. Henceforth, whenever cultivated land is taken over for the foregoing projects, not only should there be a more rigorous system of examination and approval and stricter control over the amount of cultivated land used, but action should be taken to link the taking over of the cultivated land with shouldering the obligation to restore it. Plans should be drawn up for the restoration of cultivated land that is taken over that spell out the restoration measures to be taken and requirements, or else a certain cultivated land restoration fee should be levied to help control takeovers and losses occasioned in fixing up cultivated land.

5. Intensification of water and soil conservation and control of cultivated land erosion: Adoption of farming measures, biological measures and engineering measures in combination to carry out comprehensive control, launching of farmland capital construction suiting general methods to local situations, building of water conservancy projects, leveling of the land, building terraced fields on cultivated slopes, changing farming up and down slopes to contour farming, rotating the growing of farm crops with the growing of grass to nurture fertility and improve the soil, and developing farmland that produces consistently high yields. Cultivated land on steep hillsides of 25 degrees or more, or land that has been seriously eroded as a result of the destruction of forests, the destruction of grass, or reckless reclamation for use as farmland, plus land that has been eroded by the wind and desertified land, should be withdrawn gradually from cultivation and returned to forests for pastureland in a planned way.

6. Active control of the "three wastes" and guarding against farmland pollution: The principal ways of doing this are as follows: 1) Establishment and perfection of a monitoring system. Agricultural units at the county level should set up and perfect environmental monitoring networks as a means of checking on sources of pollution. They should intensify monitoring of industrial effluents and divert water to the irrigation of farmland only if it is consistent with

pollution standards. 2) Intensification of the multiple use of industrial residues to reduce the land area taken up with piles of residues. In addition, this would prevent residue piles from acting as sources of farmland water pollution. 3) Farmland that has been polluted or is in danger of being polluted should be dynamically tested, and changes in farmland quality forecast. In addition, pertinent control measures should be recommended.

9432

CSO: 4007/381

NATIONAL

FURTHER DISCUSSION OF LAND UTILIZATION

Beijing RENMIN RIBAO in Chinese 12 Jul 85 p 1

[Editorial: "Where Is the Solution to a Large Population Relative to Available Land--Fourth Talk on Valuing Every Inch of Soil"]

[Text] This newspaper has published three editorials since 18 May on the issues of the national policy of valuing land, management of land according to law, and perfecting land management organizations. The overall intent of these articles has been to awaken people completely to value land and to prevent arbitrary takeovers and reckless use of it.

This issue has yet another aspect, namely land that must be taken over.

Irrational land takeovers must be firmly halted. Rational land takeovers, however, must be assured as, for example, use of land by the state for capital construction, transportation, small city and town development of rural and small town enterprises, and increased construction of housing as population increases. Unless such necessary uses of land are assured, development of urban and rural economic construction will be impaired as will improvements in the people's standard of living. Strict control of land is, in a fundamental sense, for the better utilization of land resources, to create wealth for society, and to create wealth for the people. The problem now is the ever decreasing amount of cultivated land, land being as precious as gold, and the need for strict control of it on the one hand, and the steady development of constructions, the continued increase in population, and the need to assure the use of needed land on the other hand. This has created sharp contradictions. What then is the solution to this problem? The way out lies with the masses and in their practical activities.

During the past 2 months, this newspaper has received a large number of letters and manuscripts on the land problem that, in addition to criticizing the arbitrary takeover and reckless use of land, have also suggested numerous ways and experiences for resolving contradictions in land use. Quite a few letters and manuscripts referring to experiences in the planning of land use merit special attention. Some provinces, municipalities and prefectures have formulated overall control standards for land used for construction and land used for living on the basis of actual circumstances. With this as a premise, individual jurisdictions have formulated specific construction plans for

cities and towns, plants and mines, rural and small town enterprises, hamlets, highways, and irrigation ditches so that the patterns of land use are equitable, advance production and accommodate daily life.

Fu County on the southern end of the Liaodong Peninsula is famous for growing apples and for tussah silk production. It is a valuable piece of land. In the past, however, this area lacked unified planning for land use and the waste of land was serious. Since 1979, this area has instituted land utilization planning, which has produced very good results. Before planning was introduced, hamlets took up a lot of land in Yongning Township in this county, each household taking up an average of 2.2 mu. Following planning, the average amount of land use amounted to 0.51 mu per household, a 176.8 percent saving over the amount of land formerly occupied. Before planning, roads took up 5,000 mu. After planning, they took up 3,000 mu for a 40 percent saving of land. Planning brought about both a saving in land and beautification of the rural development, killing two birds with one stone.

The process of formulating land utilization plans require intensive investigation and study. The status of all categories of land resources, the status of land use for industrial and agricultural construction and present population, as well as trends in development of production and forecasts of population growth must be clearly understood. Only then, can we proceed from an overall conception to overall planning, taking all factors into account in the use of land for production, the use of land for construction, and the use of land for daily life without emphasizing one aspect to the neglect of another. In addition, it is possible to proceed from a long-range conception to a satisfactory handling of the relationship between present needs and long-term needs.

Once many places formulate land utilization plans, they use no cultivated land or as little cultivated land as possible when building houses, or they use every bit of space in villages, or they use old dwelling foundations, or they construct buildings on barren flats, barren slopes, scattered plots of unused land, or poor land. These are all good ways of valuing the land. Heilongjiang Province has not only conserved land use, but has also devoted major efforts to transforming the use of abandoned lands. In this province, Jixi City has restored coal mine sink holes; Muleng County has restored fields where gold was mined Acheng County has repaired fields from which gravel has been excavated; and Qiquhar City and Fuyu City have transformed land that has been abandoned for use in firing tiles and quarrying stone, with outstanding accomplishments in all cases. If all jurisdictions were to transform diligently the use of all usable land as Heilongjiang Province has done, China's land utilization rate would be much higher than it now is.

In short, there are many ways to resolve the contradictions between a large population relative to available land. Each jurisdiction has already had numerous good experiences in this regard, and they will be able to create numerous good experiences in the future as well. The wisdom, intelligence, and ingenuity of the people are boundless. If only leadership organization in all jurisdictions will pay attention to discovering and summarizing, the work of land utilization and control can become better and better.

NATIONAL

PROBLEMS, PROSPECTS FOR CHINA'S RURAL ECONOMY

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese No 5, May 85 pp 3-7

[Article by Yan Zelong [7346 3419 7893], Finance and Trade Institute, Chinese Academy of Social Sciences: "Only the First Step in the Fundamental Solution to China's Agricultural Problems Has Been Taken"]

[Text] Editor's Note: The author of this article holds that China's rural economy is facing numerous new problems, and that from a long-range point of view, some of today's course cannot necessarily last for long. Consequently, he offers some views concerning four aspects of the problem, namely the rural situation, prices of farm products, the economic rights of peasants, and the structure of rural industry. For example, steadfast development and increase in the output of products, including grain, is necessary as a major program for the overall guidance of rural economic development. Price increases for farm products cannot be a cure-all to attain the goal of stimulating production. It is necessary to find an agricultural system that is compatible with the characteristics of China's national development and that is consistent with the fundamental principles of socialist production relationships. It is certainly necessary to have some peasants depend primarily on their own earnings based on agricultural production. Growth in the purchasing power of city and town residents must be realized in accordance with the economic laws of socialist distribution. The state-owned economy, the collective economy, and the cooperative economy will co-exist for a long time. "Leaving the soil without leaving the countryside" should not be construed as a geographic concept, etc. All these are theoretical and perceptual problems that must be solved in order to give further impetus to rural economic development. The editorial board of this magazine hopes to receive more articles that discuss this problem. Inasmuch as this article is fairly long, it will be published in two issues of the magazine. [End of Editor's Note]

Ever since promotion of contract responsibility systems linked to output, the rural economy has prospered and developed rapidly, and the finest situation in history has come about, exceeding people's prior expectations, and has provided an important foundation for further reform of the national economy. However, some new problems have begun to appear in the process of development. Some of these problems have been solved fairly well, and some have not yet

been solved. From a long-range point of view, some of today's courses cannot necessarily be maintained for long. Real difficulties have attended the emergence of this situation, and there are different perceptions about just what constitutes a fundamental solution to rural economic problems. This is one of the key problems bearing on the fairly high speed and smooth growth of the entire national economy, and it requires detached and scientific analysis and study.

I. Basic Estimate of the Current Rural Economic Situation

A basic estimate of China's rural economic situation is necessary in order to better direct future development, and the essence of experiences gained from achievements and successes already won have to be summarized. This is the only way to come up with ideas that are scientific and consistent with realities for short-term and long-term development.

A. China's Agricultural Production Is Still At a Fairly Low Level.

In recent years most places have solved the problem of food and clothing for the people, so some people suppose that a glut of farm products has already begun in China, and particularly that the grain problem is approaching solution. I believe this is to be misled by superficial appearances and that it lacks a scientific basis. A comparison with developed countries of output of grain and livestock products in terms of population shows that China is still at a relatively low level, and everyone is aware of this. Although there can be no uniform standard because of difference in living habits, the diet in different countries and among different nationalities, and there is no imperative to reach the standard of any given developed country, still one cannot help but realize that in comparison with developed countries China is still at a low level in the consumption of products of light industry such as food, clothing, and items used in daily life both in terms of quantity and quality, and in some cases is below the "poverty line" that others have drawn. Solution to the problem of agricultural product output will be a task for a long time to come. Shortages of goods within the foreseeable future will remain a main contradiction. Many reasons account for "difficulty in selling" farm products today, the most salient of which are inadequate estimates of the situation in development of agricultural production, and failure as yet to fit together the several links of procurement, storage, processing, and transportation; the varieties and quality of farm products per se are also not entirely consistent with consumers' needs; procurement and sale prices are inverted, and premium price policies for excess procurement are not entirely equitable. Second, during recent years in China, policies and science have played a leading role in the fairly great increases in agricultural production. It should also be realized, however, that throughout the country as a whole, the weather has been fairly good during the past few years as well. Basically, weather conditions have been "propitious" for growing crops. Even advanced countries are still unable to prevent or predict decreased yields that may be result from natural disasters, so we cannot rest on our laurels.

In addition, one cannot fail to realize that there are substantial differences between one region and another and between plains and mountain areas in the

speed of development of China's agricultural production. Though these differences have been shortened to a certain extent by water conservancy projects and irrigation, soil improvement, adjustment of crop varieties, sensible agricultural zoning, and communications and transportation, nevertheless, looked at in terms of the country's present economic conditions, levels of production, and the extent of development of science and general education, fundamental resolution of the problem of differences will require a long process. Readjustments of crop zoning over vast areas is not something that can be done properly overnight. Therefore, steadfast development and increase of farm product output, including grain, over a long period of time must be one of the major policies for guiding development of the rural economy in an overall sense.

B. Price Increases Cannot Be a Cure-all for Attainment of the Goal of Stimulating Production.

The procurement prices for agricultural products that the country put forward in 1983 have played a definite role in the increased agricultural production of the past 2 years. Proceeding from the concept of a "glut" or the burden on the treasury, some people suppose that the prices set for farm products were set too high. I maintain there is no basis for this. The rise in prices of agricultural products during the past several years was just the first step in setting straight longstanding erroneous agricultural policies. The goal was to revive vitality in agricultural production, and the price rises were compensatory to a certain extent. In reality, some of the benefits to peasants brought about by the rise in prices of farm products were offset not only because of the limits to the burden that the treasury is able to bear and the still existing difference from market prices, but also because of a rise in prices of industrial manufactures, some of which were fairly large. The instability caused by steady rise in the prices of farm products will be a long-term phenomenon in the country's industrialization process. All developed countries have gone through such a stage in the process of agricultural modernization. This is a reflection of the gradual coming together of the level of agricultural production techniques and management techniques with levels of advanced industrial production. How long this process lasts varies with the strength of support provided to agricultural production by industrial production and scientific techniques. In China, eradication of "price scissors" will still require undergoing a fairly long "historical period," and no one should harbor any unrealistic illusions about this. A fairly substantial rise has now occurred in distributions in some rural areas, and they have become wealthy virtually in the twinkling of an eye. Except for the fairly rapid development of some specialized households, most of this prosperity has resulted from the development of industrial and sideline production and not from increases in the output of agricultural products or a rise in prices. For the consequences of price increases in agricultural products, one should not look only at a rise in the cost of industrial manufactures that use agricultural products as raw materials or at the rise in the living index of city and town residents. It is necessary to realize also that expanded rural consumption markets have given great impetus to the development of urban industries.

Scientific study of the role of the law of value on the production of industrial and agricultural goods recognizes fully that the long-term instability of farm product prices together with other factors result in farm product price policies. I believe it is the second important policy in the overall guidance of development of the agricultural economy.

C. Eradication of Differences Between Industry and Agriculture Does Not Mean Eradication of Differences in the Nature of Industrial and Agricultural Production.

Eradication of differences between industry and agriculture and differences between cities and the countryside is one of the long-term goals of socialism. However, so-called differences means differences between the production methods and standards of living of the two and not differences between agricultural production and industrial production per se. Given what can be visualized from mankind's present science and knowledge, these differences will always exist. Agricultural production is controlled by biological laws and changes in the natural environment. It is seasonal and inconsistent. Because biological activity has not come to an end, the material elements contained in products following harvest or slaughter can only be preserved for a very short period of time. They are prone to spoilage and lose their inherent utilization value, and man's ability to control this is miniscule at the present time. An overwhelming majority of artificially synthesized chemical substances cannot be readily absorbed by man and cannot be a part of metabolism. Mankind depends primarily on biological nutrients to maintain life, and this is will always be the case. At the same time, mankind's understanding and ability to control non-living matter is advancing by leaps and bounds, and such differences between industrial and agricultural production will continue to expand steadily. This cannot but have an influence on the continued existence of differences in the make-up of city and country living, which rest on two different forms of production.

Take the situation in China's agricultural economy, for example. Not only is it relatively backward in terms of skills and management, but its labor productivity rate is also very low. The structure of farming, forestry, animal husbandry, sideline occupation, and fishery production is not entirely rational, and the economic structure has just begun the transition from a self-sufficient economy to commodity production. In the commodity portion an independent system has yet to be formed from production to processing to circulation, and it relies very greatly on the urban economy. The input that peasants have in national economic matters, which certainly includes political and cultural matters, is still very small in terms of the proportion of the population that they represent, and this is extremely unfair. With development of the rural economy, the workforce directly involved in agricultural production will gradually decline to a certain proportion; however, it is unrealistic for the guiding ideology to concentrate its energies too early on the idea of the peasants leaving the land. China is determined to become a major economic country in the world, which means a great industrial country and a great agricultural country. Of this there is not the slightest doubt. However, the road to becoming a great agricultural country is much longer than the road to becoming a great industrial country.

In view of the characteristics of agricultural production plus other elements in the national economy, scientific study to find an agricultural system for the whole process of production, processing, circulation, distribution and consumption that fits in with the features of China's national development and is also consistent with the basic principles of socialist production relationships should be the third important policy for overall guidance of the development of the rural economy.

Stalin had a famous saying that in order not to make policy errors, one had to look ahead. A dazzling prospect has really opened up in the rural situation that makes it more necessary to maintain a clear head at this time and to work out cool-headedly in accordance with overall policy objectives a new reform program and policies.

II. Steady Readjustment of Farm Product Prices Is a Gradual Equitable Process for Distributing Social Wealth Between Industry and Agriculture

Prices are not only the value created through labor in monetary form, but are also an expression of social wealth distribution relationships. Marx held that production, distribution, exchange, and consumption are inseparable parts of an organic whole. No matter that theoreticians have different views and ideas about social production under the communism of the future; for a fairly long historical period, prices will play a key role in distribution and circulation, and ultimately in production as well. This is no different in the capitalist or the socialist system. The only difference is that in the former capitalists use capital to seek profits and gain wealth that is not rightfully be theirs, thereby giving rise to a series of insurmountable contradictions. When prices of farm products are overly low, this means that the distribution that farm workers receive is too small, and this adversely affects their enthusiasm for production. When prices of farm products are too high, the extent of increase being greater than the extent of increase in wages, this means a decline in the amount of distribution to nonagricultural workers, which inhibits circulation and ultimately will adversely affect the development of production. Consequently, mere price increases cannot play a role in a market economy of sustained and consistent increases in output. When prices are raised artificially above the level of development of the whole national economy and productivity, imbalances between supply and demand may be created that lead to inflation.

A. Narrowing the Gap Between Industrial and Agricultural Income Requires an Historical Process

Inequitable prices produce inequitable distribution relationships; more work does not produce more pay, and this will lead inevitably to a shift of the workforce in the division of labor in social production. Equitable distribution between industrial and agricultural workers is a problem that must be solved little by little in the historical process of China's modernization. Certainly the gap between industrial and agricultural income has been formed by history, and one or two readjustments cannot bring about equity. The key lies in the gap between labor productivity rates. If income from engaging in agricultural production was only enough to keep body and soul together with nothing remaining, or were there no interest in increasing

accumulations and expanding investment, the gap would never be narrowed. It is necessary to have an accurate understanding of "use of industry to support agriculture." If it is understood that income from industrial and sideline occupations is accumulated to increase investment in agriculture and raise the agricultural productivity rate, then agriculture can develop fairly rapidly. However, if it is understood that a portion of earnings from industrial and sideline occupations is distributed to agricultural workers for consumption, amounting, in essence, to the substitution of industry for agriculture, development of agriculture must slacken. One must take an overall strategic view of this problem. The nub of the matter is that some peasants will have to rely on their own earnings and remain in agricultural production.

B. Agricultural Producer Direct Participation in Market Circulation Is an Important Way for Prices Gradually To Become Equitable

Ordinary market circulation both reflects consumer need and choice of the utility of goods, and also reflects the purchasing power of non-agricultural workers. In fact, it is also an indicator of the level of city and town residents' earnings and the level of investment in industrial production that uses agricultural products as raw materials. Since the promotion of contract responsibility systems, peasants have had a very large amount of authority in making decisions about choices in production planning. When virtually everything is purchased on contract by the state, changes in market demand can have scarcely any effect on peasants' production planning. It should be realized that the collective economy is organized on a foundation of private ownership. In a society having a purely private ownership economy, producers must bear market risks. In China's collective economy, however, peasants do not bear such risks. Current peasant fears of "difficulty in selling" is a kind of risk, but it does not necessarily reflect market change realities.

Current slack sales of some farm products result not from low market purchasing power, but rather from a utility that is not in keeping with demand. A major reason for this is the longstanding price parity inequities. Inasmuch as price differences for quality, price differences for season, and price differences for regions have been overly small, the price parities for different goods have not been completely equitable. Shortages of some goods, and some products not being in keeping with demands for production and consumption in daily life, have brought about definite losses and waste. Under the present system, these losses are reflected in a concentrated way in the burden that the treasury bears.

Equitable price parities and price differences are the most fundamental way in which to apply price laws to regulate production and satisfy state plan requirements. China's price parities for all kinds of farm products today are still those formulated during the period immediately following founding of the People's Republic with reference to historical price parities in the Old China. During the past several decades, such great changes have taken place in the development of production and the make-up of the economy, yet the former extent of price parity has been substantially maintained. This shows to what extent inertia exists in our economic work! Certainly, the role of price parities in regulation is not boundless. Local conditions and traditional farming habits etc still play a certain controlling role for a fairly long

period of time. Inasmuch as price differences for quality are very small, premium quality products not producing economic benefits in the marketplace, peasants lack enthusiasm for painstakingly growing premium quality varieties and making arrangements for the workforce to grade, select and sell premium quality products to the state. Some places even sell inferior products to the state, themselves selling the good products for a high price. As a result, the farm products that the state gets, and particularly industrial raw materials, are not suitable for production and export needs. Large quantities accumulate in inventory while there is a serious shortage of premium quality raw materials. These cannot but be simultaneously reflected in the circulation area where despite tremendous increases in the amount of production, quality is still a long way from satisfying market demand. Thus, some goods accumulate in inventory while the state sustains losses and the burden on the treasury increases. Because of the small difference in price for quality and season, during the slack season for production non-staple food, vegetables and fruits supplied to urban residents are in short supply while waste is astounding during the prolific season as everyone is already well aware. This results from production being divorced from markets.

Creation of conditions in a planned way and gradual liberalization of markets for agricultural and sideline products is the first step toward attainment of fair prices. Except for grain and a small amount of major industrial raw materials and export goods, which the state should buy on contract in accordance with planned requirements, state-owned businesses should withdraw from farm goods markets and deal directly with peasants or peasant economic organizations, producers and marketers dealing with each other face to face. In this way, agricultural producers would come to understand market demand and plan production in terms of varieties and quality. Profits from circulation would revert to producers and increase their earnings. Results from trial liberalization of some non-staple foods in some cities including Guangzhou show a great rise in the level of supply and quality, a reduction of waste and loss, and benefits for the state, producers and consumers alike. This shows that market laws themselves have a regulatory vitality.

C. Study of Price Policies in Terms of the Laws of Motion of Organic Entities

The notion exists universally among peasants that "sales to the state are a duty and are not economically worthwhile;" the reason for this is certainly the difference in state procurement prices and market prices. The primary reason for the creation of this state of affairs is state-set procurement prices, which include some state tax levies and deductions that are very unfair economically. The tax rate has not been changed for a long time. It did play a very important role in revival and development of production during the period immediately following establishment of the People's Republic. Today, however, the situation and conditions are vastly different. I think the time has come to consider a strict separation of prices and taxes. Agricultural taxes are paid to the state and are a duty of the people. The tax scales are set by national law. But prices for agricultural products should be completely rid of the vestiges of the "surplus grain collection system" to reduce the gap between state procurement prices and market prices. This would be both in keeping with economic laws and would aid in the normal development of industrial and agricultural production.

Public funds in socialist countries, including both government expenditures and investments in construction, should naturally be controlled differently since the former are non-productive in nature and the latter are productive in nature. To mix the two must inevitably produce quite a few contradictions, which is a universally existing phenomenon in socialist countries. Can consideration be given to a gradual separation of them? The former consists primarily of the control of tax revenues and government expenditures including those for national defense, culture and education, social welfare, and government institutions, etc., expenditures being kept within the limits of income and actions taken according to capabilities. The latter consist of state financial investment enterprises, either "capital" or "funds." Dealings are in accordance with economic laws of "investment -- production -- circulation -- increase in accumulation of funds -- expansion of investment in production. Because both parts have been lumped together for many years, price readjustments have been very difficult to solve. The inversion of purchases and sales in farm product prices also belongs in this category of problems, and this is particularly true for the sale price of grain. Price subsidies for residents' daily necessities, preferential tariffs, the lowering of tax rates or subsidization of exports, and subsidization of prices of the means of production are different. These are government welfare policies of a consumption nature that do not belong in the category of production activities. Looked at politically, non-socialist countries also have such subsidies. Developed countries mostly provide low cost housing to low income people, and the Third World mostly provides food at parity prices. If it is felt that there are too many subsidies and that the burden on the treasury is too heavy, taxes may be increased, or the subsidies may be gradually phased out. This may be decided by the National People's Congress as a matter of policy. Microeconomically, everyone advocates that production enterprises do not practice "socialism"; macroeconomically, the state's investment enterprises do not practice "socialism" either, which seems logical. Certainly changes in the latter produce substantial effects, so it is necessary to be prudent and safe and not be excessively rash in action. When the earnings of city and town residents universally rise and payments for food are only a small part of household expenditures, abolition of subsidies becomes no problem.

D. Growth of the Purchasing Power of City and Town Residents Must Occur in Accordance with the Economic Laws of Socialist Distribution

Today, the price of non-staple foods in some cities is substantially regulated by the market. Because of the limitations of purchasing power, the extent of decline in prices is fairly great. This may be a straw in the wind and sooner or later a universal sign may appear. This is worth watching. "Low grain prices hurt farmers" runs an old saying. They hurt farmers and they are not good for market stability either. But the purchasing power of city and town residents is restricted by wage levels. Some people propose increase in non-staple food subsidies or wages linked to the price index as means of raising purchasing power. These can only serve as stopgap measures. Not only will they be unable to cure root causes, but their disadvantages are numerous and their advantages few. This is because to increase subsidies is, in reality, to take money from public funds to expand markets artificially. This

cannot endure and may bring about an upward spiral of the prices of goods. What is more, increases in subsidies cannot guarantee that "money to be used to buy soy sauce will not be used to buy vinegar."

Wage reform is fairly complicated. For the national treasury to adopt uniformly set scales seems not very workable. Reform must also proceed in accordance with the economic laws of socialist distribution. If numbers of administrative personnel in government offices are held down to the minimum essential level, and most personnel engaged in economic work are automatically regulated in accordance with set wage fund proportions linked to production or to economic benefits for entrepreneurial units, the overall level in government offices will gradually adjust correspondingly. The market purchasing power formed in this way makes a distinction in the purchasing power at different levels of income, and the surplus of certain commodities and the shortage of other commodities that results from this is the only way to genuinely reflect supply and demand relationships in social production for a given period. It provides data for market forecasting and the planning of production. Only after a certain number of years of steady change will these relationships become relatively stable.

Development of the national economy in accordance with economic laws requires, first of all, the reform of the old system of rules and regulations that stand in the way of the laws performing their function, and gradual establishment of new economic priorities.

(To be continued)

9432

CSO: 4007/393

NATIONAL

PAPER REPORTS DELAY IN MAJOR YANGTZE FLOOD CONTROL PROJECT

HK310337 Beijing CHINA DAILY in English 31 Jul 85 p 3

[Article by staff reporter]

[Text] According to a newspaper report, millions of people are still living under the threat of catastrophic floods due to the fact that a major flood control project on the Yangtze River has fallen drastically behind schedule.

The Beijing-based TUANJIE BAO (Unity Journal) reported that the hold-up was blamed on the lack of funds and enthusiasm on the part of the project's management, who have used only two of the four dredging vessels specially imported for the project and "leased two others elsewhere to earn money."

The paper said the Yangtze River and Three Gorge Project Investigation Group from the Chinese People's Political Consultative Conference called for immediate reinforcement of the 182 kilometer-long Jingjiang Embankment--a key flood control barrier protecting the 10 million people who live on the Jiang-Han Plain and their 600,000 hectares of farmland.

The vast plain, situated between the Yangtze and Hanshui rivers, lies more than 12 metres below the level of the Yangtze's riverbed and is threatened by possible flooding for approximately 9 months of the year.

The paper said that the plain's only protection is the centuries-old Jingjiang Embankment which is badly in need of repair.

The journal said the CPPCC group led by 92-year-old economist Sun Yueqi visited a key section of the embankment early this month. The group discovered that the project to reinforce the dike, launched about 30 years ago, is only half finished. At its current pace, "the whole project may take 30 to 40 years more to finish."

The group also found that local authorities were pinning their hopes on the huge hydro-electric power project for the Three Gorges, which they believe "would solve the Yangtze flood problem once and for all."

The group's spokesman said, "this optimistic delusion is very dangerous because the Three Gorges project is not only now just a plan for the future but was never meant as a replacement of the Jingjiang Embankment."

The CPPCC group said in their appeal to the authorities that unless immediate steps are taken to speed up the reinforcement project, serious consequences would result in the event of heavy flooding from the Yangtze.

Early this month torrential rain and flooding claimed 275 lives in the upper reaches of the Yangtze in Guizhou and Sichuan provinces in southwestern China.

According to weather forecasts, more heavy rains are expected.

CSO: 4020/310-F

NATIONAL

IDEAS FOR FARM PRODUCE PRICE LIBERALIZATION EXPLAINED

Beijing NONGMIN RIBAO in Chinese 9 Jul 85 P 3

[Article by Hu Xianshi [5170 6343 0013]: "Cursory Discussion of Price Liberalization and Stability of Market Prices"]

[Text] At the direction of CPC Central Committee (1985) Document No 1, during the most recent period of time, numerous cities throughout the country have liberalized prices for fresh and live produce, live hogs, and vegetables in accordance with their own individual circumstances. Even though there was a little chaos in some places at the outset, for the country as a whole the overall situation was better than had been anticipated and market prices were basically stable. This reform marked a good beginning for the reform of the whole price system, and a firm step was taken in this regard. Practice has shown that price liberalization and price stability are not contradictory, but are mutually reinforcing. Price liberalization is a prerequisite for price stability, and price stability has to be realized through price liberalization.

I

For a long time in the past, we practiced state monopoly procurement and exclusive marketing rights. In large and medium size cities, and in industrial and mining areas in particular, monopoly procurement and marketing of vegetables, live hogs and fresh and live produce was greatest and controls most stringent, causing a vicious cycle of "the more scarce, the greater the control, and the greater the control, the more scarce." Market supplies were insufficient, so the state had no choice but to regulate prices very strictly, virtually freezing them. From 1958 through 1977, market prices were extremely stable in appearance; however, they were "stable" but not dynamic. For a long time, vegetables in state-owned vegetable markets have been monotonous; quality has not been high, and they rotted during the peak season and were in short supply during the slack season. For most live and fresh produce, usually it was a case of "stable price but out of stock" This result of price freezing caused the market to lack the economic vitality it should have had and there was a loss of motivation to produce.

In addition, the shortcomings of the control system also led to serious economic losses, which added to the state's financial burdens. Take 1984, for

example: Losses in the vegetable business for the country as a whole amounted to 500 million yuan. In Beijing, the loss for the year was 80 million yuan, in Tianjin 40 million yuan, and in Shanghai 50 million yuan. Without reform, the burden is bound to become heavier and heavier.

Confronted with this serious situation, the only way out lies in abolition of the state monopoly procurement and exclusive marketing system, reform of the urban production, supply and marketing control system, gradual liberalization of farm product prices, and expansion under state plan guidance of market regulation. It is not only imperative that such liberalization be carried out, but conditions are ripe for it. In recent years, agriculture has produced bumper harvests year after year, and supplies of the basic necessities of life such as grain, cotton, and edible oil are plentiful. Following several years of readjustment, the number of agricultural and sideline products covered by state monopoly procurement or assigned procurement has been reduced from 180-odd to 39 kinds (medicinal herbs accounting for 34 kinds). A suitable process exists whereby producers, dealers and consumers have more channels of circulation and produce reaches markets as conditions require.

II

Once farm product prices have been liberalized, will it be possible to maintain basic market price stability? Might the people's real standard of living decline as a result? These are questions about which everyone is concerned.

The fact is that the most fundamental factor affecting price increases is whether the amount of currency issued meets the amount needed for commodity circulation. Prices are value in monetary form. Prices are decided by the value of all categories of goods on the one hand and by the value that currency represents on the other. Whenever a general round of price increases takes place, this amounts to an actual devaluation of currency and is the result of inflation. Without inflation, there would always be price fluctuations but no general price rise. When there is no change in the amount of currency required for commodity circulation, if the amount of currency issued doubles, prices will also double. If the volume of goods circulated also doubles during this period, even though the amount of currency issued doubles, prices will not rise. Therefore, so long as we strictly control the amount of currency in circulation, controlling in an overall sense and liberalizing in specific ways, it will be possible to guard against the occurrence of general price increases in the course of reform.

In addition, we must understand correctly the basic implications of price stability. Price stability has been one of our consistent policies, but price stability does not equal immutable prices. We formerly understood price stability in a one-sided way, lumping together stable prices and frozen prices. In speaking about basic price stability, we meant that the overall level of market prices was basically stable and not that the price of each and every commodity was fixed and immutable. It must be realized that a socialist economy is a planned commodity economy founded on a system of public ownership. Under the effects of factors such as changes in supply and demand

relationships, the prices of goods always fluctuates in terms of the value of goods. These price fluctuations are normal and rational. They help the workforce and the means of production shift toward industries requiring development, and they help the coordinated development of all trades and industries. Prices are the most sensitive and most effective price levers. Our conscious application of pricing techniques, our taking of the initiative in the liberalization of farm product prices on the basis of the objective laws of economic development, plus readjustments, can make price parities for various kinds of goods more and more equitable, can give expression to their separate value, and serve to guide production and regulate consumption.

Simultaneous with the state's planned, directed, and step-by-step readjustment of prices should be a corresponding reform of the wage system and suitable increases in subsidies, so that the wages of staff members and workers rise higher than the price index. The state should also take various actions, including the disbursement of a considerable amount of funds, to support reform of the price system, to take an active part in market regulation, to take in and send out goods, to level out prices, to avoid blindness in action resulting from market readjustments and the creation of great fluctuations in prices, and to ensure that the real earnings of urban residents do not decline as a result of price readjustments. Consequently, fundamentally speaking, liberalization of the prices of farm products will not lead to market price instability or a decline in the people's standard of living.

III

Liberalization of farm product prices will bring about many new situations and new problems in markets. People will see in the market situation that prices "rise a lot and decline little," that prices of some goods rise quite a bit, that the situation is not all that one might hope it would be, and that "real benefits" from price reform are slow in coming. Some complaints from the masses will be hard to avoid and some dissatisfaction will be reasonable.

It will be necessary to admit realistically that the sudden liberalization of agricultural and sideline products, and especially of state monopoly procurement and exclusive marketing rights that have endured for more than 30 years, will require a process for both those dealing in them and for consumers. Mass reactions should impel us to make careful calculations, to do close planning, to exercise prudence in action, and to effect implementation gradually. However, one cannot become terror stricken on account of a single loss, become overcautious, want to liberalize but not dare to liberalize, vacillate now to the left now to the right, and hesitate to move forward. It should be realized that price reform is the key to success or failure of reform of the entire economic system. Without any ready-made experience that can be borrowed as a guide, it will not be possible to reach the goal in a single step. The market ferment that took place during the previous stage in some places was largely a problem of implementation; it positively cannot be attributed to farm product price liberalization or be allowed to shake determination to reform. For example, during the previous stage, vegetable prices in Beijing Municipality tended to be high and the public had a very large number of complaints about vegetable supply. The principal reasons were

the fairly late liberalization of vegetable prices in Beijing, which missed this year's vegetable planting season as a result of which the area sown to vegetables was insufficient and output was adversely affected. This is only a temporary phenomenon, however. With the help of Central Committee leaders and cadres concerned, Beijing Municipality leading organizations have rapidly taken several actions to open wide the gates to allow vegetable farmers to come into the city. As a result, the vegetable supply situation has gradually taken a turn for the better. Vegetables have become plentiful now, and prices have fallen.

Looked at from yet another angle, the agricultural production cycle is long, and once farm product prices have been liberalized, one cannot expect instant results. This is because a process is required to get goods to market after the peasants receive information from markets. At the beginning, prices will be a little high to encourage the peasants to produce. But with expansion of production and the opening of numerous channels, goods will flow through the markets and prices will naturally fall. In Zhejiang Province, for example, this was the way the situation developed after liberalization of pork prices. The situation in Guangzhou following comprehensive liberalization of vegetable prices in November 1984 in the wake of the abolition of assigned procurement for fresh fish for the previous 2 years also demonstrated this point. It may be anticipated that following a very long period of practice, and the burgeoning of one kind of market, a situation of price stability will appear before our eyes.

9432

CSO: 4007/411

NATIONAL

MEAT, MILK, EGG PRODUCTION UP IN JAN-JUN

OW121202 Beijing XINHUA in English 0931 GMT 12 Aug 85

[Text] Beijing, 12 Aug (XINHUA)--China's output of meat, milk and eggs rose rapidly in the first half of this year, according to the State Statistical Bureau.

Output of pork, beef and mutton was up 15.6 percent to 7.65 million tons. This represented a gain of 1.05 million tons over 1984's half-year period.

Pork production increased 14.7 percent while beef and mutton went up 42.3 percent.

Milk output stood at one million tons, or 33.3 percent higher than the same 1984 period. Poultry and egg production went up 43.4 percent.

Officials said that production growth was in part due to allocation of 20 million tons of grain to the development of animal husbandry this year. Half of this went to pig breeders.

China's 2,500 feed-processing plants, each with an annual capacity of over 2,000 tons, produced 12 million tons of mixed and compound feed in 1984, four million tons more than in 1983.

Officials said that sale of pigs was still a problem because of transport and other factors causing uneven commodity circulation. About 1.5 million pigs in Shandong and Liaoning Provinces could have been put on the market if transport facilities had been available.

Meanwhile, the supply of lean pork cannot meet demand. Fat pork is unsalable in Beijing, Shanghai and Tianjin.

CSO: 4020/327

NATIONAL

PEASANT RESEARCH ASSOCIATIONS FLOURISH

OW150930 Beijing XINHUA in English 0731 GMT 15 Aug 85

[Text] Beijing, 14 Aug (XINHUA)--Peasant research associations have sprung up in rural China over the past three years with the development of commodity production in the countryside.

Voluntarily organized by agro-technicians, cadres and experienced peasants, the associations study techniques ranging from cultivation of grain, vegetables and fruit and raising of livestock and fish, to energy saving and manufacturing of farm machines.

According to an incomplete survey, there are more than 24,000 such associations in China, some of them are supported by professors and research scientists from nearby colleges and universities.

The associations were set up against the background that peasants, those engaged in specialized production in particular, were eager to raise their output and income after the implementation of the responsibility system in 1979.

More than 10,000 peasants in Tianjin's suburban areas formed over 500 associations to study techniques in 30 fields.

An association in Nancaicun Township has developed 11 fine strains of watermelon, which have been planted on 6,700 hectares all over China.

One strain is sown between 15 and 20 July, and harvested from 1 to 15 October, over three months later than the conventional ones.

Frame watermelon cultivation developed by the association doubled the per-hectare output to an average of 127.5 tons this year.

The success of grafting watermelons and gourds has solved the problem of degeneration and rotting of watermelon plants caused by continuous cultivation on the same plot.

Another association in Dongshuangtang Township obtained better results in the improvement of sheep strain, artificial insemination, and goat's milk research.

Its artificial dairy goat fertility rate is above 90 percent, the highest in the country. Research into frozen dairy goat sperm is the first in China.

Daxian Prefecture, in eastern Sichuan Province, where China's first peasant research association was set up in early 1983, now has 940 associations involving 100,000 peasants.

Eight of the 58 members of an association in Bazhong County earned more than 10,000 yuan each last year from growing taro plants. Over 60 peasants in Xuanhan County have mastered the cultivation techniques of 19 types of edible and medicinal fungus with the help of a local association.

CSO: 4020/327

NATIONAL

WIDESPREAD DEVELOPMENT OF MARKET TOWNS URGED

Hanan JINGJI DILI [ECONOMIC GEOGRAPHY] in Chinese No 2, May 85 pp 146-150

[Article by Ren Qingyao [0117 3237 1031], Economic Research Institute, Zhejiang Provincial Planning and Economic Committee: "On the Development of Townships into Market Towns and an Exploration of the Building of Market Towns"]

[Text] The pervasive reform of the rural economic system and development of rural commodity production and commodity exchange have presented us with an historical problem in the building of rural market towns. It appears that the development of township and market town enterprises will be the basis for market towns, that rural commodity exchange will be the marketplace for the market towns, and that a population that has left the land but not the countryside will congregate in the market towns. The peasants that have begun to take the road to riches will use the market towns as cultural and educational centers, and the market towns will become bridges in the interchange between and the blending of cities and the countryside. Clearly, the building of market towns has a bearing on the overall picture of vitalizing the rural economy and building of the four modernizations. Here are some superficial views about turning rural areas into market towns and problems in the building of market towns.

I. Reform of the Rural Economic System and the Turning of Rural Areas into Market Towns

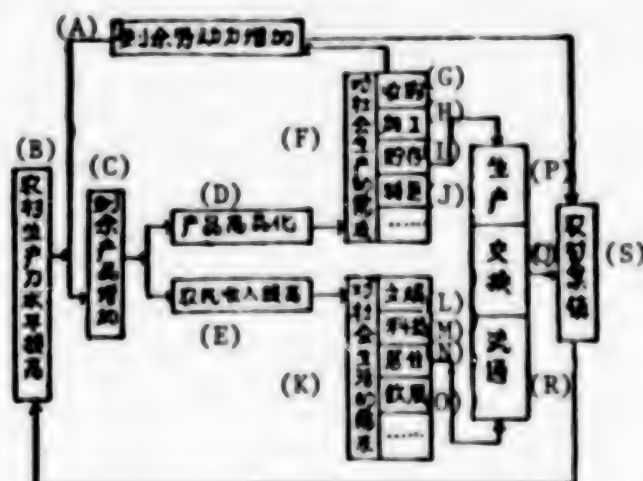
The rise of rural market towns is a socio-economic phenomenon and an outgrowth of the intensification of the social division of labor. However, the burgeoning of rural market towns in China at the present stage results from the rural economic system that has followed in the wake of the 3d Plenum of the 11th CPC Central Committee.

The following progression may be used to summarize the relationship between rural productivity and the production responsibility system instituted in rural China following the Third Plenum: A formerly low level of productivity - institution of production responsibility systems - more pay for more work - a rise in peasant initiative - concern for agricultural production - a heightening of productivity level. Such a progression shows that more pay for more work was not the goal of reform of the rural economic system when

production responsibility systems were instituted, that it was simply a technique employed to increase rural productivity. Consequently, the rise in rural productivity was a fundamental goal in reform of the rural economic system.

Everyone is aware that a modern social economy is a huge system, and that within this system any change or replacement of a single element can lead to changes in the whole. Looked at in current terms, growth in rural productivity has brought about two major changes as follows: Destruction of the closed economic structure of rural self-sufficiency and semi self-sufficiency bringing about an increase in surplus commodities in the hands of the peasants; and the freeing of surplus rural labor, i.e., a relative increase in the amount of rural labor. These two increases have given either direct or indirect impetus to the advancement of the formation and development of rural towns (please see the figure below). Take Zhejiang Province as an example. Comparison of 1983 with 1978 shows a 2.55-fold increase in the amount of volume of business in trade between cities and rural market towns, and a 70 percent increase in the number of markets. In the short period of 2 years from 1982 to the third general population census of June 1984, rural organic towns at the county level increased by one-fourth.

Figure 1. Relationship Between Growth of Rural Productivity and Development of Rural New Style Market Towns



Key:

- | | |
|------------------------------------|---------------------------------|
| A. Increase in surplus labor | K. Needed for social life |
| B. Growth of rural productivity | L. Recreation |
| C. Increase in surplus commodities | M. Science and technology |
| D. Products sold as commodities | N. Shelter |
| E. Rise in peasant income | O. Beverages and clothing |
| F. Needed for social production | P. Production |
| G. Procurement | Q. Exchange |
| H. Processing | R. Circulation |
| I. Storage | S. Rural new style market towns |
| J. Transport | |

The problem today is how to regard the now burgeoning rural market towns. The writer believes that they are a special road for "making rural areas into market towns" in China.

When looking into the history of human socio-economic evolution, Marx showed great foresight in bringing to light the basic tendency in human socio-economic evolution. He pointed out that "modern history is the urbanization of the countryside" ("Complete Works of Marx and Engels" Vol 46, p 480). The tide of urbanization that swept everything before it around the globe when human society entered the 20th century testifies to the brilliant thesis of this revolutionary teacher. In 1920, the world's city and town population stood at 13.6 percent of the total, but by 1980 it had shot up to 42.2 percent, and it is expected to reach more than 50 percent by the end of this century. Of China's 1 billion population, 800 million live in the countryside. According to the third general census data, the proportion of population living in cities and towns throughout the country was only 20.6 percent, while the proportion of city and town population in the world's advanced countries and regions averaged 69 percent, and averaged 31 percent in the Third World. Recently leading comrades on the Central Committee pointed out that we are not "countryfying cities," but have to "urbanize the country." The problem lies in how to do it. The road that capitalist countries have taken has bankrupted the countryside and caused lopsided inflation in large cities. But ours is a socialist country in which, given the characteristics of China, the only correct road to take in the urbanization of rural villages is to turn rural villages into market towns as represented by active development of market towns.

Observation and study of the basic process of contemporary world urbanization shows it to have three major features as follows: First is industrialization as the foundation of urbanization; second, the form of urbanization is to make the rural population non-agricultural; and third, the result of urbanization is an increase in urban living facilities and a rise in residents' standard of living. The conversion of rural villages into new style market towns in China at the present time basically coincides with the features of rural urbanization around the globe.

First, the spectacular rise of rural and small town enterprises forms the foundation for the formation of towns in rural areas. In recent years, rural and small town enterprises have sprung up like bamboo shoots after a rain. Output value of rural industry has been far greater than the output value of agriculture, and small town industry has become the mainstay of the rural economy. In 1983, the output value of small town industry in Shuangmei Township in Shaoxing County, Zhejiang Province accounted for 95.5 percent of the gross output value of the whole township's output value from farming, industry and sideline occupations. In Jinxiang Town in Cangnan County, it accounted for 94.5 percent. Similar examples in Guangdong, Jiangsu and even throughout the country as a whole are too numerous to mention individually. One might say that the rural economy is in process of undergoing a structural change from being predominantly agricultural to predominantly industrial, and this provides the requisite conditions for turning the countryside into new style market towns.

Second, the large increase in non-resident population in market towns is a mark of the conversion of rural villages into towns. As the structure of the rural economy has changed, excess rural labor has found new opportunities. Rough estimates have shown that 70 percent of the workforce may be released from farming in Zhejiang Province to work in rural and small town enterprises. Take Keqiao Town in Shaoxing County as an example. Comparison of 1983 with 1978 shows the population with fixed residence in towns to have increased 22.9 percent. If the more than 4,000 non-resident population in the town that works part time in industry, agriculture, and business (i.e., the population that has left the soil but not the countryside) is added to this, the increase amounts to 73 percent. The non-resident population amounts to one-fourth the total town population. It appears that a turning away from agriculture by the rural population and a great increase in new style market town population is the trend in contemporary China's rural villages.

Third, the increase in market town living facilities and the rise in the standard of living of residents (including peasants) is the result of rural villages having converted to market towns. Accompanying development of rural and small town enterprises and acceleration of the rural population becoming non-agricultural population, town living facilities have increased greatly, and residents' (including peasants') standard of living has risen greatly. Take Jinxiang Town in Cangnan County as an example: Figures show that since 1979 more than 1,400 new storied buildings have been built, more than 400 television sets and more than 700 bicycles have been purchased, 46 telephones have been installed in homes, and 650,000 yuan has been put in publicly operated welfare enterprises, 200,000 yuan of which has been used to set up a running water works, 220,000 yuan of which has been used to build streets and roads, 140,000 yuan of which has been used to build a 3,060-square-meter vegetable market, 75,000 yuan of which has been used to build a public park, and 14,000 yuan of which has been used to build a television broadcasting relay station.

II. Objective Conditions for Turning Rural Villages in Market Towns and the Central Role of Rural Market Towns

The emergence of China's "rural urbanization" in the form of market towns has been dictated by China's objective socioeconomic conditions and the central role of rural market towns.

First has been the requirements of China's national conditions. China is a large country in which 80 percent of the population is agricultural. Even though its city and town population is proportionately relatively small, in absolute figures it stands in the forefront of the world; however, its make-up of large, medium size, and small cities and towns is extremely irrational (see Table 1). Table 1 shows that among the 289 cities of different size and rank throughout China, 20 especially large cities with a population of 1 million or more contain 41.08 percent of the total urban population, and that 28 large cities with a population of 500,000 to 1 million contain 19.47 percent of the total urban population. The two together account for 60.5 percent of the country's total urban population, while the proportion of urban population living in small cities with a population of 200,000 or less amounts to only 16.83 percent. Such lopsided development of large and particularly large

cities has reached the stage where it just has to be controlled. Large city "evils" such as environmental pollution, shortage of usable land, congested transportation, and difficulties in providing electricity and water are widespread. A look at medium size and small cities shows no more than 241 at best. If growth of each city is limited to the guidelines for a large city of 500,000, they could contain a population of only 120 million. If the current permanent residents of these cities is deducted, they would be able to take care of only 10 percent of the rural population. Even so, less than 30 percent of China would be urbanized. Consequently, hastening the pace of urbanization of China's rural villages and thoroughly changing China's backward socio-economic situation will require proceeding from China's national condition, using development of rural and small town enterprises as a basis for converting rural villages to market towns.

Table 1. Percentage of Cities of Different Sizes Formally Designated Municipalities in China in 1983

| Size of city (10,000 people) | >100 | 50~100 | 20~50 | <20 | Totals |
|---------------------------------|---------|---------|---------|---------|----------|
| Number of cities | 20 | 28 | 76 | 165 | 289 |
| Percentage of total | 6.92 | 9.69 | 26.30 | 57.09 | 100 |
| Population (10,000) | 4,303.2 | 2,039.9 | 2,368.3 | 1,763.2 | 10,474.8 |
| Percentage of total | 41.08 | 19.47 | 22.61 | 16.83 | 100 |

Source of data: CHENGSHI GUIHUA [URBAN PLANNING], No 13, 1984.

Second is the needs of today's new industrial revolution. The modern world is in the process of change. A new industrial revolution centered upon the application of micro-electronic techniques is impacting upon the overall social economy. The rapid replacement of traditional industries with newly created industries has brought about a rapid development of "rising sun industries," and a dramatic waning of "setting sun industries." Restructuring of industry means a change in the form of people's employment, with large segments of the workforce shifting from traditional manufacturing industries to social service trades and information industries. The advent of these trades and industries entails in turn the use of large amounts of micro-electronic technology. The application of this technology has produced the following trends: plant automation, office automation, and automation of agriculture. Behind this trend is the future development of the mode of activity in human society in the direction of dispersal, i.e., reliance on modern communications technology and computers to permit individuals at home to control social production automatically. This sets the stage for realization of the reconstitution of the mode of living in compact communities--the "idyllic cities" concept. Since the 1960's, the

suburbanization of large cities and the large-scale construction of satellite cities in capitalist countries has been, in reality, an embryonic form of the dispersal of humans from the mode of living in compact communities that has followed from the new industrial revolution. Since the future mode of living will be dispersed communities, from now on, our efforts to build 30,000, 50,000, or a minimum of 5,000 rural market towns that have a certain concentration capability and whose basic facilities can be substantially integrated is on the mark.

Dialectical materialism tells us that both internal and external causes exist for any and all change. Internal causes are the basis for change in things and external causes are the conditions permitting these changes. If one were to say that national conditions in China and requirements for the new industrial revolution were conditions giving rise to the conversion of rural villages into market towns, then the internal role of rural market towns would be a fundamental motive force in turning rural villages into market towns. Without doubt, rural market towns are a principal center in the city and town residential area system. They connect with cities above and with rural villages below; they are fulcrums linking cities and rural villages. They have the following five central roles in development of the rural economy:

First, they are communications centers. Market towns are outgrowths of the development of a commodity economy. Commodity production and commodity exchange require, first of all, good transportation conditions. In recent years, most of the places in which commodity production has developed fairly rapidly have been rural market towns in which transportation is developed, such as Keqiao Town in Shaoxing County through which pass the Xiao-Yong Railway, the Hangzhou-Wenzhou Highway, and the Su-Shao Canal. Streams and roads crisscross the town and fan out in all directions making transportation extremely convenient. This is the transportation hub for the eight townships and one town in the Keqiao region. In 1983, the amount of cargo transported by water alone amounted to one-fourth the total amount of cargo hauled by water and roads throughout the region.

Second, they are centers for circulation. On their foundation as transportation centers, they may become commodity flow centers, otherwise known as trade centers. In Keqiao Town, which is a transportation center for western Shaoxing County, farm trade markets have done an unprecedentedly brisk business in recent years. In 1983, country fair trade transactions in the town increased 1.6-fold over 1978, with vegetable, piglet, and bamboo and lumber markets in which the volume of transactions daily reached more than 10,000 yuan. The role of flow centers is not only to ship out things produced in market towns or to ship in things needed. More importantly, they serve as points at which commodities may be concentrated and from which they may be dispersed. Commodities from surrounding areas gravitate to these towns and are exchanged. The peasants from nearby who go to market in Keqiao Town come from the eight townships and one town in the Keqiao region. Those from farther away come from Shangyu, Zhuyi, Xiaoshan and as far away as Hangzhou.

Third, they are production centers. Production is the material foundation for the formation and development of market towns. Development of circulation must inevitably stimulate and give rise to the development of production. The

formation of production centers is a concrete manifestation of the development and a major function of market towns. All of the locally run enterprises in Dama Township, Tongxiang County are concentrated in market towns; 15 locally run enterprises in Xixing Township, Yuhang County are also concentrated in Sandun Town; and 40 local town enterprises have been set up in recent years in Qiaotou Town, Yongjia County. In a narrow street less than 500 meters long, 88 small goods stalls are crowded together to form a hub wholesale trade market for goods from all over the country. Between 2,000 and 3,000 people or as many as more than 5,000 went to this market daily bringing unprecedented economic prosperity to this rural mountain market town.

Fourth, they are information centers. Most market towns have rudimentary post and telecommunications facilities, which play a direct vanguard role for rural commodity production, and particularly for production and marketing by rural and small town enterprises. The rise of eight rural specialized markets in Wenzhou City has been very much related to information and post and telecommunications facilities. Statistics show that between 1978 and 1982, the volume of posts and telecommunications business from all small towns increased 95.34 percent, 72.66 percent for Liushi Town and 41.03 percent for Yishan Town, while the annual rate of increase for the country as a whole was 15 percent.

Fifth, they are scientific-technical and cultural centers. Given the concentration of industries and businesses and the gathering of human talent, in an objective sense, market towns become centers for rural digestion of modern science and technology and frontline positions giving impetus to the development of productivity. Keqiao in Shaoxing County, Qiual and Jiangshan in Qin County have set up cultural centers. In addition to being used for cultural and entertainment activities by market town residents, more importantly they function in scientific and educational activities such as after-hours education and continuing education for staff members and workers in rural and small town enterprises. Market towns have really taken up a role as centers for guiding rural science and technology and cultural entertainment.

III. Conception for the Realization of Converting Villages to Market Towns

To summarize the foregoing, the turning of rural villages into market towns is consistent with China's national circumstances. It is a brilliant, farsighted and distinctive way in which to "urbanize" rural villages. It can provide for local employment of surplus labor and integrate agriculture, industry and commerce, making cities and the countryside a single entity. It can both avoid the odious ballooning of large cities while helping bring about a balanced pattern of productivity, and sets the stage for reducing the three major distinctions [between town and country, industry and agriculture, physical and mental labor]. The following conceptions are given below for enhancement of market town construction and for the accelerated transformation of rural villages into market towns:

1. Heightening of understanding and strengthening of leadership: The role of the building of rural market towns is still a long way from arousing people's serious attention. Basically the situation is one in which no one in a

position of leadership devotes attention to it; there is no management, and organization has not been perfected. All economic activities of human society are far from being able to exist cut off from space. One very important economic lesson learned in the course of building the economy over the past 30 years has been that to have only "project" concepts and to lack "city" concepts in construction frequently produces a chaotic pattern of basic facilities and a proportional structural imbalance with many needless detours being taken. When present development of rural commodity production likewise encounters these problems, the lessons of history must be assimilated. There has to be a concept of the development of commodity production and commodity exchange, and there also must be an intensification of the concept of building market towns, the two linked organically in synchronized planning and synchronized construction. This entails having a standing organizational and leadership structure to manage, plan, and build market towns so that organization can be perfected, leadership made concrete, and the daily conduct of business systematized.

2. Integration of villages and towns, the towns leading villages (or townships): In the prevailing market town management system, towns are separated from the countryside, and economic relations between small towns and market towns are artificially separated. In some organic towns and historically ancient towns, a multiplicity of region, town, and township governments exists side by side, official organizations overlap, many agencies are involved, and there is mutual wrangling. On the basis of our survey and the large amount of data we have seen, this management system has seriously impaired rural commodity production (particularly town run enterprises) and the coordinated development of market town construction; it has also hampered development of rural productivity, and reform is essential. It appears that an integration of villages and towns centering around market towns to lead and spur on development of the whole rural economy is one feasible avenue to take. Integration of villages and towns is an inevitable extension of the regional administrative merger of prefectures and cities in a leadership system in which cities lead counties. Market towns should be the political, economic, cultural and technical centers for a specific area, and for a gathering together of production, circulation and exchange. Management of the economy in accordance with inherent economic relationships and objective laws requires taking full advantage of the radiating role of the small economic centers that market towns are.

Integration of villages and towns, town leading villages (a single economically strong town being able to lead several villages, and an economically weak town leading another village) has at least three advantages: First, it can eliminate the artificial separation of villages and market towns for institution of unified planning, synchronized construction and equitable development in the spread of rural and small town enterprises and the building of market towns. Second, towns leading villages (or townships) can help enhance horizontal connections between the urban and rural economies, make comprehensive arrangements for surplus rural labor, and give impetus to the development of rural villages into market towns. Third, it can help increase the economic power of market towns, buttress the building of basic facilities and transform small cities and towns.

3. Making planning scientific: As the principal form of future human habitation, market towns are a major matter bearing on future generations. Once built, it will be difficult to replace them. Experience in the building of some of China's major cities tells us that planning based on subjective ideas and lacking a scientific basis can only make the building of cities disorderly and unsystematic, razing followed by rebuilding, and building followed by re-razing. On the basis of the daily needs of residents in modern cities and the countryside, market town planning must be scientifically conceived and carried out with a contemporary point of view, i.e., market town facilities must be varied, market town appearance must be in good taste, market towns must be functionally sectioned, and landscaping must include parks and groves of trees.

4. Construction funds should come from many sources. Funding the construction of market towns is an extremely real problem. The cleverest housewife cannot make a meal without rice. A look at China's present situation shows the country unable to provide a large amount of funds for use in building market towns. Thus, it is necessary to use self-reliance, making the most of one's own strengths, use of many channels, many modes, contribution of funds from many quarters, and a sharing of burdens. A look at the present situation shows that the building of market towns can be accomplished through combining deduction of a percentage of rural and small town enterprise profits and contributions of funds from individual units (including industrial plants, supply and marketing cooperatives, banks, the postal service, housing administration offices, and tax offices under county jurisdiction), plus simultaneous efforts to absorb idle funds of city and town residents and of nearby peasants.

9432

CSO: 4007/405

NATIONAL

HOW TO ACQUIRE MORE CAPITAL FOR RURAL ENTERPRISES EXPLORED

Beijing NONGMIN RIBAO in Chinese 10 Jul 85 p 1

[Commentary: "Rural and Small Town Enterprises Must Broaden Their Sources of Funds"]

[Text] Rural and small town enterprises throughout the country have developed very rapidly since 1984. In many places, peasant pooling of funds for self-run or jointly run enterprises has produced a new and unprecedented momentum for development. Still, in a few places, the burning desire to become rich and anxiety about getting started in the face of a tightening of controls over loans from banks has made it increasingly difficult to continue to obtain funds, and a circular situation of riding a tiger and finding it hard to dismount has occurred. As a result, the most urgent task at the present time for continued stable development of rural and small town enterprises has become resolving the shortage of funds.

Resolution of this funds problem requires, first of all, an increase in the understanding of the masses of cadres, and guarding against and overcoming passive waiting and an attitude of attempting nothing and accomplishing nothing. It requires action to broaden channels, increasing income and decreasing expenditures, amassing funds from numerous quarters, and tapping the potential for funds within enterprises. This is the way for rural and small town enterprises to muster funds.

An overwhelming majority of rural and small town enterprises have developed by relying on the pooling of peasants' funds and on labor accumulations. Now it is necessary to protect and fully arouse peasant enthusiasm for pooling funds. This entails talking up the genuine benefits of investing in enterprises, with no practice of formalism, much less allowing the peasants to suffer losses and lose their capital. Methods that use the pooling of funds as a pretext but are actually "profiteering" can only stifle, and will most certainly not arouse, peasant enthusiasm. Peasants are very practical; only when they really see some benefits from investment will they be willing to part with their money. Therefore, all jurisdictions should make arrangements that take all factors into consideration to operate more rural and small town enterprises that require little investment, show results quickly and yield high returns.

The pervasive development of reforms in urban economic systems provides extremely good opportunity for rural and small town enterprises to use funds spread throughout society. Structural reforms for state-owned enterprises and the expansion of self-determination have increased the amount of funds people own. Some enterprises that are limited by their own circumstances and have to expand into rural villages run joint venture enterprises with peasants. Some places that are relatively well developed economically and who need to use some of the funds they possess have gone to undeveloped areas to develop raw and processed materials and energy. Rural and small town enterprises in undeveloped areas can use diverse methods such as direct importation of funds, compensatory trade, or joint venture share purchases to bring in funds. Not only can these methods make up for the shortage of funds for rural and small town enterprises, but they can also strengthen horizontal economic ties between cities and the countryside.

The most dependable way for rural and small town enterprises to accumulate funds is to increase productions and practice thrift, and to tap the internal potential of enterprises for funds. Today, some rural and small town enterprises want to get loans from above and bring in funds from outside while their internal management is chaotic, economic effectiveness low, their products accumulating in inventory, their burden of debts difficult to bear, their turnover of funds slow, and much of their "live" money become "dead" money. Consequently, enterprise management should be improved and strengthened with vigorous efforts made to reduce non-productive expenditures and to organize forces as quickly as possible to inventory output and check funds, to promote the sale of products, to recover funds owing, to turn "dead" money into "live" money, and to hasten turnover of funds.

As they help rural and small town enterprises to tap internal potential for funds, credit authorities should also increase somewhat the "lubrication" of village and town enterprises as their individual circumstances require, so that existing production capacity can be put to use. This would be advantageous for the country, for the enterprises, and for the peasants. In reality, 61 percent of development funds for rural and small town enterprises have come from their own accumulations. In 1984, rural and small town enterprises' savings in banks and credit cooperatives were greater than the loans they derived from these two sources. Clearly, simultaneously with relying on principally on the pooling of funds and the tapping of potential, if everyone would coordinate turnover, the current tightness of funds for rural and small town enterprises could be resolved.

9432
CSO: 4007/406

NATIONAL

EXHORTATION TO FIND MORE WORK OPPORTUNITIES FOR PEASANTS

Beijing NONGMIN RIBAO in Chinese 15 Jul 85 p 1

[Editorial: "Help the Peasants Think of More Ways To Become Prosperous"]

[Text] The rural situation has become better year after year during the past several years. Some peasants have taken the lead in becoming rich, guiding an even larger number of people to joint prosperity. Nevertheless, a look at the national situation shows that China is currently a long way from the "comparatively well off" level, and that though most peasants have only enough food to eat and enough clothing to wear and a little to spare, in some places the peasants have yet to get enough to eat and wear. We must have a clear perception of them, and better help peasants think of more ways to prosper.

Leading the masses to become wealthy is a bounden duty of Communist Party members. It is a bounden duty of all cadres that history has bestowed. Formerly, because of some mistakes, this desire could not be fulfilled. Following the 3d Plenum of the 11th CPC Central Committee, however, the Central Committee corrected "leftist" policies and formulated a series of rural economic policies that went through several steps. The first was called a liberalization policy. The second was the contract responsibility systems; the third was institution of the specialized household and the development of a commodity economy; and last year readjustment of the rural industrial structure was proposed. Development of the rural economy is attributable to the Central Committee's having constantly proposed new methods and having adopted new policies based on the new circumstances of rural villages. Economic work goes through myriad changes and the situation changes constantly; relying on past experience to manage the economy for several years will not do. Take, for example, "one farming, two raisings, and three processings." This was the experience that comrades used to guide rural work in some places, but farming was frequently applied too narrowly. It was supposed that farming meant grain farming. Actually, this was not the case. China has a vast area that differs in countless ways, as individual regions have their own characteristics and strengths. Mountain regions may grow grass or trees, or they may grow vegetables, cotton, oilbearing crops, hemp, fruit, medicinal herbs or a variety of crops. Therefore, helping the peasants to think of more ways to become rich is to suit general methods to local circumstances, to use, exploit, or foster local resources.

Methods cannot be conjured out of thin air. They require that cadres change their work style, immerse themselves in realities, and investigate and study. All true knowledge proceeds from realities. Improvement of economic work will require assisting peasants in finding several practical ways to become rich, and then arduous efforts will have to be made and thoroughgoing, solid, and systematic investigation and research work done. To become a good leader is very difficult, and the difficulty lies in the need to come up regularly with good experiences, good "moves," and good methods. But the source for all these things is the masses and practice. Do you genuinely want to help the peasants find ways to become rich? Then immerse yourself in practical activity; go out among the masses; make arduous efforts for a long time and not just for a short time; be systematic and not haphazard; and do a solid rather than a lackadaisical job of investigation and study.

Once a good method has been found, leading cadres and leading institutions should also do "less empty talking and more real deeds." Nowadays, the fact is that many cadres are encumbered all day long with meetings, papers, and some needless "seeing off of those departing and welcoming of those arriving.". Others have a bad state of mind in that they are more concerned about people's sensibilities. They do not dare to attend to what they should attend to or control what they should control. When problems come up, they avoid becoming embroiled in them; instead they buck them upward or unload them downward. Such a state of mind fails to grasp the contemporary pulse; only by personally becoming involved in the practice of rural economic reform and by summarizing experiences and methods from among the masses, putting them into effect one by one and doing things one at a time, it is possible to lead the peasants step by step toward the path of wealth.

9432

CSO: 4007/406

NATIONAL

DIRECTION OF HYBRID RICE GROWING OUTLINED

Beijing NONGMIN RIBAO in Chinese 15 Jul 85 p 3

[Article from NONGYE KEXUE YAOWEN [IMPORTANT AGRICULTURAL SCIENCE NEWS]:
"Paddy Rice Expert Yuan Longping Discusses the Current Direction of China's
Hybrid Rice Cultivation"]

[Text] Hybrid rice breeding expert Yuan Longping [5913 7127 1627] provided the following views recently about the direction of China's hybrid rice breeding:

1. More than 95 percent of the xian [long-grained] hybrid rice breeds currently used in production are bred from "untamed" cytoplasm male sterile lines from which there is a latent possibility of outbreaks of certain communicable diseases and insect pest infestations. Consequently, it is presently extraordinarily necessary to discover and breed new male sterile lines.
2. The gametophyte male sterile line's male sterility is unstable, the degree of its restoration is not all that it should be, and it cannot be used widely in production. Future efforts must be made to breed gametophyte male sterile lines in which male sterility is stable and restoration possible across a broad spectrum.
3. The price of hybrid rice seeds is currently too high. If costs are to be lowered, it will be necessary to try to increase the propagation of male sterile lines and output from seed production. This will require, in turn, the breeding of fine flower male sterile lines (with large stigma) and restorer lines (plump anthers) for use in improving the cross pollenization seed formation rate.
4. The quality of husked rice from hybrid paddy is not all that it should be. In this regard, the emphasis of future research should be on the breeding of male sterile lines to produce fine quality husked rice.
5. During the past several years, broad use has been made in China's production of several local hybrid strains such as Weiyou No 2, Weiyou No 6, and Xianyou No 2. These have gradually become prone to various diseases and insect pest infestations. There is urgent need for new multiple resistant hybrid strains.

6. Light and heat conditions during summer in north China are exceedingly favorable for cultivating paddy. However, the problem of water shortage restricts growing in that area. Therefore, the breeding of hybrid japonica rice with fairly high ability to withstand drought is an effective way in which to develop paddy rice production in north China.

9432

CSO: 4007/406

NATIONAL

STATE COUNCIL REGULATIONS ON WATER CHARGES

OW070534 Beijing XINHUA Domestic Service in Chinese 1137 GMT 30 Jul 85

[Text] Beijing, 30 Jul (XINHUA)--Regulations for Appraisal and Collection of Water Charges and Administration of Water Projects

(Promulgated by the State Council on 22 July 1985)

Chapter I General Provisions

Article 1. To make rational use of water resources, economize on water, and guarantee the necessary expenses for the operation, administration, heavy repair, and renovation of water projects, so that they can fully yield economic results, all water projects will be paid for water supplied. Industrial, agricultural, and all other water users will pay water charges to water projects administrative units in accordance with regulations.

Article 2. Governments at all levels will step up propaganda and education on paying water charges in accordance with regulations among water users, and strengthen leadership over the appraisal of water charge standards, and the collection, use, and administration of water charges.

Article 3. Collectively-managed water projects may decide their own water charge standards, and formulate their own collection methods in the light of local water charge standards and management regulations.

Chapter II Principles for Appraising and Deciding Water Charge Standards

Article 4. Water charge standards will be appraised and fixed in accordance with the different uses, on the basis of water supply cost, and in line with state economic policy and the conditions of local water resources.

Water supply costs include the project's expenses for operation, administration, heavy repair, depreciation charges, and other expenses which may be included into the cost in accordance with regulations. Regulations for depreciation charges, heavy repair expenses, and other expenses which should be included in the cost, will separately be provided for by the Ministries of Water Conservancy and Power, Commerce, and Finance.

Article 5. Standards of Charges for Various Uses of Water:

1. Water charges for agricultural use. Water charges for grain crops will be appraised according to the water supply cost; water charges for cash crops may be slightly higher than cost.

The cost of water for agricultural use does not include cost of labor input by the peasants as part of the fixed assets for depreciation purposes.

2. Water charges for industrial use.

In appraising the charge standards for water consumption, water costs will be computed on the basis of the entire investment in water supply (including labor input by the peasants converted as part of the fixed assets) plus 4 to 6 percent of the investment as profit. Water charges in areas with inadequate water resources may be slightly higher than the aforementioned standards.

The charges for unflow water (water which, after use, enters the original waste supply system with its quality still up to standard, and can be used for irrigation and other beneficial purposes) and circulating water (water which, after use, returns to the reservoirs, where quality is up to standard) will be appraised and decided in accordance with the principle of water supplier and user sharing the economic benefits.

3. Water charges for daily use in cities and towns. Charges for water supplied by water projects to urban waterworks for use in the daily life of urban residents will, generally, be appraised according to cost, or with a little profit. The water charge standards may be lower than those for industrial use.

4. Water charges for hydroelectric stations. In general, the charges will be set at 12 percent of the station's, or 8 percent of the power grid's, selling price for electricity, provided that the same water is reused for other purposes. If the same water is not reused for other purposes, the water charges will be two to three times higher, depending on the conditions of water resources. Stations on the first level of terraced hydroelectric stations, using the same water project to regulate their water levels, will pay charges according to the above-mentioned standards; charges for stations on the second and subsequent levels will be lower than those on the first level.

Water for small hydropower stations (single generators under 6,000 kw and total installed capacity under 12,000 kw) may be charged less than the above-mentioned water rate. Preferential prices may also be set for water used by small hydropower stations recently run by peasants.

Water for pumping to store energy and generate electricity is charged for to guarantee payment of expenses for the management and overhaul of regulating pools and other projects in the lower (or upper) reaches.

5. Prices of water used to improve the environment and public health may be set in accordance with the water rate for agricultural use.

6. Prices of water supplied by water conservancy facilities exclusively for breeding and crop cultivation may be set in accordance with the water rate for industrial crops.

In setting the price of water for industry, agriculture, and other departments, it is necessary to set the basic level of water consumption at the same time.

The price of water used by waterhead and irrigation canal projects should be set separately in accordance with the above-mentioned stipulations, if the projects own independent accounting management organizations.

Chapter III The Collection of Water Rates

Article 6. Units in charge of water conservancy works must strengthen the management of water consumption, use water in a planned way, and collect water rates in accordance with the quantity of water supply (water used by hydropower stations may be charged for according to their generated energy.)

The system of basic water rate plus charges for additional water consumption may be adopted for water for agricultural use. The seasonal floating water rate system may also be adopted. Water may be charged at reduced prices or provided free of charge, if it is used for irrigation in a high-water season, and if its consumption is not listed in the plan.

In areas where water resources are short, water for agricultural use may be charged for according to regulations at above-quota progressive rates.

Units using water must install water meters. Those without meters should now measure their water consumption in accordance with the hydrological measuring standard.

Article 7. Water for industrial use and consumption in urban living, and water used by hydropower stations must be charged for monthly according to the quantity of water consumed.

Water for agricultural use must be charged for in accordance with the frequency and quantity of water consumed. Units which use water more often may be charged quantitatively on a quarterly basis.

Units using water must pay water rates on set dates. Units exceeding the time limit should pay a surcharge for overdue payment. Units in charge of water conservancy works retain the power to limit, or suspend, water supply to those units which repeatedly ignore notices urging them to clear overdue payments.

Chapter IV. The Use and Management of Water Rates

Article 8. Units in charge of water conservancy works must carry out economic accounting, strengthen management and administration, and continually increase economic results, and gradually switch to enterprise-type management and socialization.

The expenses for the operational management, overhaul, and renovation of water supply works are paid using the water rate. Expenses for the annual repair and management of flood control works and the flood control facilities in multi-purpose utilization works should still be listed in the budget for the operating expenses of water conservancy works according to regulations in force, or follow Article 15 of the current regulations.

Article 9. Water rates are the main source of funds for units in charge of water conservancy works. These funds are regarded as budgetary incomes if water conservancy departments invite finance departments to check and ratify these funds and set them aside as the cost of water supply and appropriations for operating expenses. These units can, accordingly, be exempted from paying the funds for the construction of key energy resources and communications projects. The surplus funds may be transferred and used in the following year within the scope of water conservancy management. No other departments are allowed to draw from water rates or divert them to other purposes.

Article 10. Leading water conservancy departments should appropriately regulate the surplus and shortage of water rate incomes received by units in charge of water conservancy works. Units, whose natural conditions and works are good or whose water rate standard is higher than the cost of water supply, earning larger profits, must deliver a set amount of the surplus to the state, and may retain the amount above the quota for themselves. Units whose natural conditions and works are poor, or whose water rate incomes are lower than the cost of water supply, will receive a set amount of subsidy and be instructed to eliminate deficits before a set date. Average units may balance their incomes and expenditures and retain profits for themselves, but will not be subsidized when suffering deficits.

Article 11. Departments in charge of water conservancy may pool part of the depreciation funds of water conservancy engineering units to play and arrange for the renovation or rebuilding of water conservancy projects under their jurisdiction. But the fund thus pooled should never be used as expenditure by the departments themselves.

Article 12. A greater part of the surplus from water charges of water conservancy administrative units will be used to set up a development fund, while a small part will be spent on collective welfare and as bonuses (the specific ration or actual sums are subject to the approval of higher authorities). In years when the revenue from water charges is relatively large, a "reserve fund for rainy days" should be set up to meet fund shortages in other years when it is relatively small.

Article 13. Water conservancy administrative units should strengthen their financial management, establish a sound fiscal system, strive to cut expenses, and do a good job in collecting, managing, and using revenues from water charges. Departments in charge of finance and water conservancy should supervise and check the situation in the implementation of various financial systems, as well as the results from fund expenditures.

Chapter V. Supplementary Articles

Article 14. For reservoirs where evacuees have not been completely resettled, a fee may be added to the water charges to help the evacuees develop production.

Article 15. Units in charge of flood gates, dykes, protective embankments, seawalls, and drainage projects, from which some units clearly benefit, may charge industrial and commercial enterprises, farms, farming households, and other units benefitting from these projects maintenance and management fees, in accordance with the actual management costs and that for major overhauls.

Article 16. For large water conservancy projects extending across two or more provinces, autonomous regions, or municipalities, the standards for water charges will be set by consultations among the provinces, autonomous regions, or municipalities involved, and submitted to the Ministry of Water Resources and Electric Power for approval.

The standard and measures for managing costs of water conservancy projects directly controlled by the Ministry of Water Resources and Electric Power will be set by organizations in charge of the drainage areas where the water conservancy projects are located, and be reported to the Ministry of Water Resources and Electric Power for approval.

Article 17. The water cost standard for newly-built or newly-expanded water conservancy projects may be individually set.

Standard and management measures for costs of water conservancy projects subordinate to the various provinces, autonomous regions, and municipalities, as well as the Ministry of Water Resources and Electric Power, may be revised every few years.

Article 18. The Ministry of Water Resources and Electric Power has the authority to interpret these regulations and is responsible for supervision and control over their implementation. In accordance with these regulations, and taking local conditions into consideration, the various provincial, autonomous regional, and municipal water conservancy departments may consult with their corresponding price, finance, and other departments concerned to set the standard and management measures for water costs and report them to the provincial, autonomous regional, and municipal people's government for approval, and to the Ministry of Water Resources and Electric Power for the record.

Article 19. This regulation will come into effect on the date of promulgation. The "Regulation for the Collection, Use, and Management of Water Charges for Water Conservancy Project," which was formulated by the Ministry of Water Resources and Electric Power, and approved and transmitted by the State Council on 13 October 1965, is hereby rescinded.

CSO: 4007/412

NATIONAL

DEVELOPMENT OF COMMODITY GRAIN BASES URGED

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL TECHNOLOGY] in Chinese No 5, May 85 pp 13-16

[Article by Kuang Chanjuan [6782 1292 1227] and Xue Zhishi [5641 1807 1102] of the Chinese Academy of Agricultural Sciences Zoning Institute: "Readjustment of Crop Structures and Construction of Commodity Grain Base Areas"]

[Text] I. Readjustment of Crop Structures and the Focus of Readjustments

Grain production has developed very quickly in China in recent years. Total grain output reached 814.24 billion jin in 1984, up by 39.69 billion jin or 5.1 percent over 1983. This was an increase of 150 billion jin or 22.6 percent compared with the 1979 figure of 664.2 billion jin. This has been a good thing from the beginning and we should continue to focus on grain in the future. Because consumption, conversion, product varieties and so on are not keeping pace with grain, however, a relative surplus of grain in regional and varietal terms has appeared, while supplies of some farm and sideline products cannot meet demand. This shows that current crop distributions should be readjusted. Agriculture [cropping] accounted for 62.09 percent of the total national value of agricultural output in 1983. Forestry was 4.08 percent, animal husbandry was 14.68 percent, sideline production was 17.43 percent and fisheries accounted for 1.72 percent. Looking at the structure of the area planted in crops, grain crops accounted for 79.2 percent of the total planted area, while cash crops accounted for 12.3 percent. Moreover, there are regional imbalances in grain production, which have brought about imbalances in production and marketing of grain product varieties. National grain purchases over a 3-year period from 1981 to 1983 exceeded sales by an average of 5.9 billion jin each year. Looking at the differential between purchasing and sales, there is a shortage of around 14.5 billion jin of wheat, a surplus of around 12.4 billion jin of rice, a surplus of 4.6 billion jin of corn and a surplus of 2.7 billion jin of soybeans. In terms of a regional distribution, the northeast has a surplus of corn and a shortage of paddy rice and wheat. The south has a corn shortage and a surplus of paddy rice (Table 1).

Table 1. Surplus-Deficit Situation in Grain Purchasing and Sales, Average for 1981-1983, Different Regions of China

| (a) 地区 | (b) 包括范围 | (c) (d) | | (e) 粮食购销 余缺量 (亿斤) | (f) 分品种购销余缺量 (亿斤) | | | |
|-----------|-------------|-------------------|-------------------|----------------------------|-------------------|-------|-------|-------|
| | | 粮食 总产量 (亿斤) | 人均占 有粮食 (斤) | | (g)小麦 | (h)大米 | (i)大豆 | (j)玉米 |
| (k)全 国 | | 7112.3 | 689.3 | 59.1 | -145.1 | 123.7 | 26.7 | 45.6 |
| (l)东 北 | 辽、吉、黑 | 1743.4 | 807.7 | 55.3 | -80.8 | 3.4 | 28.5 | 84.2 |
| (m)华 北 | 北京、津、冀、晋、鲁 | 1165.2 | 605.8 | -100.9 | -74.1 | -16.8 | 0.6 | -9.4 |
| (n)豫 皖 | 苏、豫、皖、苏 | 1439.1 | 766.2 | 97.9 | 40.5 | 33.2 | 7.9 | 3.2 |
| (o)长江中下游 | 鄂、湘、赣、浙、沪 | 1490.1 | 789.0 | 39.4 | -23.8 | 85.5 | -6.2 | -16.1 |
| (p)华 南 | 闽、粤、桂 | 796.0 | 633.9 | -24.4 | -29.3 | 10.3 | -2.7 | -2.2 |
| (q)西 南 | 川、云、贵、藏 | 1079.2 | 654.5 | 8.4 | 7.7 | 11.5 | -1.6 | -9.3 |
| (r)西 北 | 陕、甘、宁、青、新 | 399.2 | 568.0 | -16.6 | -5.3 | -3.4 | 0.2 | -4.8 |

Key:

- a. Region
- b. Area included
- c. Total grain output (100 million tons)
- d. Amount of grain per capita (jin)
- e. Amount of surplus or deficit in grain purchases and sales
- f. Amount of surplus or deficit in purchases and sales according to product variety (100 million jin)
- g. Wheat
- h. Rice
- i. Soybeans
- j. Corn
- k. China
- l. Northeast: Liaoning, Jilin, Heilongjiang
- m. North: Beijing, Tianjin, Hebei, Shanxi, Shanxi, Nei Monggol
- n. Henan-Anhui-Jiangsu: Henan-Anhui-Jiangsu
- o. Middle and lower reaches of the Chang Jiang: Hubei, Hunan, Jiangxi, Zhejiang, Shanghai
- p. South: Fujian, Guangdong, Guangxi
- q. Southwest: Sichuan, Yunnan, Guizhou, Xizang
- r. Northwest: Shaanxi, Gansu, Ningxia, Qinghai, Xinjiang

Note: The grain surplus in the Northeast appeared under restricted supplies.

Based on the above situation, the focus of readjustments of cropping structures should be: 1) Regions not suited to the growth of grain crops and cultivated land on slopes greater than 25 degrees gradually should be taken out of cultivation and restored to forestry or animal husbandry. Regions suited to the growth of grain crops cannot easily reduce the area and should continue to focus on grain production and strive to increase yields and product quality. 2) Readjustment of grain variety structures. The northeast should

reduce the area planted in corn and develop paddy rice and soybeans. The region in the middle and upper reaches of the Chang Jiang should expand the area in legumes and miscellaneous grains and should focus on development of superior quality rice. Purchases of rice in China exceeded sales by an average of 12.37 billion jin a year over a 3-year period between 1981 and 1983, all of it low quality. The market situation is that low-quality rice cannot be sold, there is a surplus of glutinous rice and supplies of polished round-grained nonglutinous rice cannot meet demand. In reality, China has many excellent quality rice varieties. Examples include Guangdong's Zengcheng County Ximiao [4798 537] rice, Shaanxi's Yangxian County Hei [781] rice and Xiang [449] rice, Tianjin's Xiaozhan [1420 454] rice, and others such as Zi [479] rice, Xuenuo [5877 4754] rice and other varieties. All of them have been welcomed in domestic and foreign markets and should be developed further according to local conditions. 3) Accelerate grain conversion to promote coordinated development of the forestry, breeding and processing industries. There are two directions for grain conversion. The first is to develop animal husbandry and the second is to develop the food processing industry. Calculated according to per capita amounts of meat, eggs and milk in China in 1983, the nation needs a total of 142.5 billion jin in feed grains. If each of China's more than 2,000 counties converts 50 million jin of grain into food products, an additional 100 billion jin or so would be required.

II. Readjustment of Crop Structures Requires Good Construction of Commodity Grain Base Areas

Grain production in China has developed very quickly, and total output is the highest in the world. China has large and rapidly growing population, however, so per capita amounts are small. According to data for 1957 to 1977, total national grain output increased by 45 percent, while the population grew by 46.2 percent, causing per capita amounts to fall. Although the amount of grain per capita increased to 759 jin in 1983, the figure still is 34 jin less than the world average for that same year. Although per capita amounts exceeded 800 jin in 1984, the amount in China is much less compared to certain other nations (Table 2).

Table 2. Per capita Output of Various Foods in Major Nations, 1983

| | (a) | (b) | (c) | (d) |
|--------------|-----------|-----------|-----------|-----------|
| | 粮食 (斤) | 肉类 (斤) | 奶类 (斤) | 鸡蛋 (斤) |
| World | 793 | 63.6 | 218 | 13.1 |
| China | 759 | 27.5 | 4.3 | 6.6 |
| Canada | 3994 | 197 | 641 | 27.6 |
| U.S. | 2171 | 216 | 538 | 34.3 |
| Australia | 3952 | 349 | 746 | 27.3 |
| France | 1764 | 204 | 1346.1 | 31.9 |
| Soviet Union | 1581 | 120 | 713 | 30.9 |

Key:

- a. Grain (jin)
- b. Meat (jin)
- c. Milk (jin)
- d. Eggs (jin)

Looking at the average figures for the 3-year period from 1981 to 1983, China consumed about 679.84 billion jin of grain each year, an average of 673.5 jin. Grain rations accounted for about 500 jin of this amount. Regionally speaking, however, there still is an area with a population of 60 million where grain rations are less than 400 jin. Furthermore, if we calculate according to the animal foods structure that is required nutritionally for maintaining basic human health (48 jin of meat, 48 jin of milk and 24 jin of eggs), China would require 336 billion jin of grain used as feed for meat, eggs and milk alone. An additional 88.3 billion jin in feed grain for draft animals makes a total of 424.3 billion jin. If grain rations, seed grain and reserve grain are added, China needs 1,057.1 billion jin of grain each year, which is 42.86 billion jin more than total grain output of 814.24 billion jin in 1984. It has been estimated that with a population of around 1.12 billion, the additional grain needed for food and industry would make national grain requirements equal 1,163,100,000,000 jin.

According to conventional forecasts, with no change in the area planted in grain, and extrapolating at a 3 percent annual growth rate in yields, national grain yields could rise to 520 jin per mu by 1990, and total output may reach about 890 billion jin. We can see that China certainly will not be rich in grain by 1990, because demand will exceed supplies by 200 billion jin. Readjustment of crop structures, therefore, first of all requires good work in construction of commodity grain base areas.

Practice has proven that good construction of commodity grain base areas has many advantages. First, it can make full and effective use of production potential and strengthen the national economy. Second, it can better meet the state's need for grain. Third, it can, through improved labor productivity, produce more grain at less expense and provide a material guarantee for readjustment of industrial structures in rural areas. In the 60 preliminary commodity base areas set up in China, for example, total grain output was 66 billion jin in 1984, up by 4.7 billion jin or 7.7 percent over 1983. Total cotton output was 6.8 million dan, up by 1.88 million dan or 38 percent over 1983. Their average rates of growth for grain and cotton were double and 83 percent higher than the national averages, respectively. With the exception of oil crops, output of other crops also has increased substantially, greatly exceeding national growth levels. Animal husbandry also has developed very quickly. Large draft animals increased by 9.1 percent compared with 1983. The number of pigs removed from inventory increased 11.4 percent over the previous year. Pork, beef and mutton output reached 1.33 billion jin, up by 9.9 percent over 1983. The number of poultry raised increased by 14.8 percent over the previous year. All of these were higher than the national growth rate. The value of agricultural output reached 1.92 billion yuan, up by 2.2 billion yuan or 13 percent over 1983, which also was higher than the national growth rate. Per capita incomes were 436.2 yuan, up by 5.8 percent from 1983 and 94 yuan higher than the national per capita income level of 342 yuan.

These facts prove that counties in these commodity base areas not only have increased grain production, but also have had a rather substantial increase in other products. They now have moved from concentration on grain to synthetic

management and comprehensive development of agriculture, forestry, animal husbandry, sideline production, fisheries, industry, commerce, construction, transportation and services. Construction of commodity grain base areas, therefore, can increase grain output and also can promote rationalization of industrial structures in rural areas.

III. Rational Distribution of Commodity Grain Production Base Areas and the Question of Results

A. The distributional basis for commodity grain production base areas.

Construction of commodity grain base areas not only should first consider construction in grain surplus regions but also should consider their construction in grain deficient areas. The focus, however, should be on grain surplus areas. The provinces (municipalities and autonomous regions) of China have set up various types of commodity grain base areas in the more than 30 years since the founding of the nation and they have played an active role in increasing grain output. Their different natural and economic conditions, however, have led to a situation of surpluses and deficits in production and sales in the provinces (municipalities and autonomous regions), so they cannot be completely identical.

According to information for 1983, there are 12 grain-deficient provinces (municipalities and autonomous regions) where per capita amounts of grain are less than 650 jin: Fujian, Guangdong, Shanxi, Qinghai, Gansu, Yunnan, Guizhou, Xizang, Nei Monggol, Beijing, Tianjin and Shanghai. Several hundred million jin of grain is brought into these provinces (municipalities and autonomous regions) each year, sometimes reaching several billion jin. If we rely only on grain surplus regions to expand commodity grain base areas in order to meet our own needs, grain shipment of distances over 1,000 li will occur. It is very difficult to transport large amounts in a large nation like China with its underdeveloped communications. For this reason, counties with the conditions to develop grain within grain-deficient regions should be selected according to local conditions to construct commodity grain base areas and gradually improve self-sufficiency levels.

Apart from the 12 grain-deficient provinces (municipalities and autonomous regions) listed above, the 17 remaining provinces (regions) basically have attained self-sufficiency or some surplus in grains. The main grain surplus regions at the present time are Liaoning, Jilin, Heilongjiang, Jiangsu, Zhejiang, Anhui, Jiangxi, Henan, Hubei, Hunan and Sichuan. These 11 provinces historically have been primary paddy rice, wheat, corn and soybean producing regions. They have an excellent production foundation and large number of commodities. Net requisitions and purchases generally exceed 100 million jin in grain-producing counties, the maximum being more than 1 billion jin. The percentage of marketed products is fairly high, over 40 percent. Input/output ratios are much higher than in grain-deficient regions. In Anhui, for example, each yuan of investments can increase grain output by about 9 jin. Some of the grain surplus provinces (regions) mentioned above are near grain consuming cities like Beijing, Tianjin and Shanghai, while others have good land and water communications, which is favorable for shipping

and exporting. For this reason, construction of commodity grain base areas should focus mainly on these provinces (regions).

Based on state needs and domestic and foreign market demand, apart from further regional selection, attention also should be given to levels of labor productivity and to the degree of intensity during the process of construction of commodity grain base areas. Examples include superior high output commodity grain base areas and grain and livestock base areas with high conversion rates, integrated grain-oil and grain-sugar base areas, export commodity base areas, comprehensive commodity base areas, famous rare and new product base areas, systematized commodity production base areas and so on. In the area of grain varieties, based on the situation of a national wheat shortage of 2.26 billion jin in 1983, unmarketable low quality rice and the future increase in demand for fine grains and feeds and other conditions, we should selectively construct high quality high output wheat and corn base areas. Paddy base areas should selectively construct high quality rice production base areas. In consideration of the sharp increase in demand for beer and the need to change the situation of long-term dependence on barley imports, it is quite necessary that barley base areas for beer be set up in Zhejiang, Jiangsu, the northeast and other regions. Furthermore, soybeans are a traditional export commodity in China and there also is a certain market for mixed legume exports. Export soybean base areas should be constructed selectively in suitable production regions.

B. An ideal distribution for commodity grain production base areas.

Based on the above distribution and according to the indices for selective construction in different regions, national commodity grain production base areas can be selected. Related departments already have selected 393 counties as commodity grain base areas. These base area counties (including 57 counties that already have received state investments, not including the three seed-producing counties in Guangdong that have received state investments) are located in 26 provinces (regions). Some 292 or 74.3 percent of these counties are located in grain surplus provinces (regions), while 101 or 25.6 percent of them are located in grain-deficient provinces (regions). In terms of the class of grain varieties, 191 counties or 48.6 percent concentrate on paddy rice, 133 or 33.8 percent focus on wheat and 69 or 17.6 percent focus on miscellaneous grains. We propose that these base area counties be the targets of "voting" on investments in construction of base areas during the period of the state's Seventh and Eighth 5-Year Plans or an even longer period.

Analysis of data from 1983 shows that the 393 base area counties account for 17.7 percent of all the counties in China, while they have 433.16 million mu of cultivated land, equal to 29.4 percent of China's cultivated land. The agricultural population is 213.99 million, 25.4 percent of the total national agricultural population. The amount of cultivated land per capita for the agricultural population is about 2 mu, which is 0.25 mu higher than the national average of 1.75 mu per capita for the agricultural population. Total grain output was 269.7 billion jin, equal to 34 percent of the national total output of 774.5 billion jin. Agricultural per capita grain output was

1,260 jin, which is 175 jin higher than the agricultural per capita average for China as a whole. Net grain requisitions were 85.7 billion jin, 66 percent of the 129.9 billion jin in total national requisitions. These base area counties obviously have a rather good foundation. If the state or localities make the appropriate investments, further use can be made of the grain production advantages.

C. Analysis of the results of commodity grain base area counties.

According to forecasts, if the nation develops at a normal rate, total grain output will reach 890.0 billion jin in 1990. If the 393 commodity grain base area counties are completed, estimated grain output could reach 919.0 billion jin, which is 29 billion jin more of grain than if the base areas were not constructed. The value of output based on constant 1980 prices can reach 4.1 billion yuan. The benefits from increased output and the economic results are quite obvious.

Furthermore, good construction of these base area counties can permit mutual supplementation of surpluses and deficits, regional self-sufficiency and competition to export grain. The northeast now has a wheat shortage and overstocks of corn. The north, Henan, Anhui, Jiangsu and other areas have fairly large amounts of wheat and paddy rice but not enough corn. Construction of base areas would permit mutual supplementation of surpluses and deficits in these regions.

The middle and lower reaches of the Chang Jiang, especially Hunan, Hubei and Jiangxi, are China's main grain surplus regions. They had surpluses of 12 billion jin in 1983, while Shanghai, Guangdong and Fujian had shortages totalling 6.6 billion jin. This means that construction of base areas in the middle reaches of the Chang Jiang not only could supply grain to Shanghai, Guangdong and Fujian but also can be used to set up specialized high-quality rice export base areas. Over the three-year period from 1981 to 1983 in the southwest and northwest, Sichuan had a grain surplus of 2 billion jin, while Guizhou, Yunnan and Xizang had a grain deficit of 1.2 billion jin. The northwest had a grain deficit of 1.66 billion jin. The combined surplus and deficit in these two regions left a net deficit of 860 million jin. Self-sufficiency would be possible by constructing base areas. All areas selected for establishment of commodity grain base areas can strive for self-sufficiency and increased exports. They also can achieve local supplies of grain in some regions. This is of great significance for energy resource conservation, reduced shipping and conservation on expenses.

12539

CSO: 4007/368

NATIONAL

PROGRAM OUTLINED FOR CONSTRUCTING LIVESTOCK FEED INDUSTRY

Beijing JINGJIXUE ZHOUBAO in Chinese 9 Jun 85 p 3

[Article by Yu Yefan [0151 0048 0416]: "Development of the Livestock Feed Industry Must Be Considered in a Comprehensive Way"]

[Text] China's livestock feed industry has developed gradually as an accompaniment to the energetic development of hog raising and the assembly line modernization of chicken farms. Outstanding successes have been scored during recent years everywhere in the active development of the livestock feed industry, in tremendous increases in output of compound feeds, and in increasing varieties of livestock feeds. The quality of marketable livestock feed has also risen. In 1984, national output of compound livestock feeds and blended feeds reached more than 12 million tons, an 11-fold increase over 1981, which should make people happy. Nevertheless, simultaneous with tremendous increase in output has been several problems urgently requiring all-around consideration.

1. Overall Planning and a Rational Pattern in the Livestock Feed Industry

As a result of a lack of overall planning in quite a few places at the present time, it has not been possible to consider in a comprehensive way resources, techniques, marketing and transportation. Livestock feed patterns in the livestock feed industry are irrational even to the point of being divorced from plans for development of the livestock industry. Consequently, the country has to do rational planning in the building and distribution of the livestock feed industry, avoiding ill-advised production and duplication in construction. Insofar as possible, limited funds should be used for sites and projects that must be built.

2. Dovetailing from Top to Bottom and Matching Large and Small

Compound livestock feed production has developed fairly rapidly, but production of livestock feed additives and development of pre-mixed feed production have lagged behind considerably. There should be a genuine strengthening of the existing foundation of the dovetailing of production and the matching of construction for these three aspects. In this connection, it

is urgently necessary to proceed from China's realities and to borrow and absorb the experiences of developed countries, to study earnestly, to do comprehensive planning, to make overall arrangements, and to put plans into effect over a period of time.

3. Broadening Sources of Income and Reducing Expenditures, Making Full Use of Materials

In most places attention to development of the livestock feed industry should be focused on the transformation of grain for use, including the use of corn. It must be realized that more than 40 percent of China's gross output of grain is paddy rice, and that because of limited transportation, the hauling of grain from the north to south to make livestock feed is very uneconomical. For this reason, development of the livestock feed industry should not overemphasize use of corn to the neglect of paddy rice and other materials. The enthusiasm of scientific research personnel should be directed at research and development of livestock feed formulas based on full use of paddy as a raw material. In addition, the processing for use of several hundred billion stalks and stems should be also made a part of the agenda for developing the livestock industry so that livestock resources are fully, completely, and rationally used. In countries with a developed livestock industry, green storage and ammoniation of stalks and stems and the processing of pasture grasses receive fairly serious attention. Experiences in these regards deserve our study and promotion.

4. Intensification of Checks To Assure Quality

Livestock feed quality is a prominent problem. Looked at objectively, China's livestock feed additive production got underway relatively late, and imports of additives were restricted by inability to pay foreign exchange. This inevitably adversely affected livestock feed quality. Objectively speaking, there generally is insufficient recognition of the importance of livestock feed quality and a one-sided emphasis on amounts and profits to the neglect of results from livestock feed. In order to promote improvement of livestock feed quality, not only should there be active development of livestock feed additives, but there should also be genuine implementation of policies providing for premium prices for premium quality. Quality evaluations and comparisons should also be organized regularly with prizes given for premium quality products to encourage enterprises through competition to establish livestock feed brands over a period of time and to develop name brands. The state should promulgate livestock feed regulations as quickly as possible and establish and perfect checking and supervisory organizations for strict control over livestock feed quality.

9432

CSO: 4007/411

NATIONAL

NATIONAL FEED INDUSTRY DEVELOPMENT PLAN FOR 1984-2000

Beijing NONGYE GONGCHENG [AGRICULTURAL ENGINEERING] in Chinese No 3, 5 Jun 85 p 1

[Text] Feed is the material foundation of animal raising. The feed industry is a firm pillar in modernization of animal raising. Development of animal raising is of extreme significance for accelerating production of livestock, poultry and fish, satisfying urban and rural demand, improving the people's lives, increasing peasant incomes, improving the benefits of feed, providing raw materials for light industry and the food industry, developing intensive processing of farm and sideline products, and promoting comprehensive development of benign cycles in agriculture and the national economy.

The 12th CPC National Congress put forth the magnificent goal of comprehensive creation of a new situation in socialist modernization and construction and striving to quadruple the gross value of national industrial and agricultural output by the end of this century. Furthermore, it affirmed that agriculture is a strategic point in achievement of this magnificent goal. The feed industry is an important component of agriculture. Development of the feed industry has enormous potential for quadrupling the value of agricultural output.

The long period of erroneous "leftist" influences led to a serious imbalance in the ratio between cropping and animal raising within the agricultural economy and caused animal raising to develop slowly. Five consecutive years of readjustment since the 3d Plenum of the 11th CPC Central Committee have brought a turn for the better. The feed industry also has an excellent starting point. Overall, however, production levels and scientific and technical levels in animal raising in China remain low. The value of output from animal husbandry and fisheries still accounts for less than one-fifth the total value of agricultural output. Per capita amounts of meat, eggs, milk and fish are lower than world average levels. The difference is even greater compared to nations with developed animal raising.

One of the main reasons for the low level of animal raising and the poor economic results in China is the nutritionally incomplete components of feeds, backward animal raising methods and low feed benefits. A feed industry system that corresponds to development of animal raising has not been formed. Output of compound and mixed feeds in China still accounts for only 10 percent of total feed concentrate consumption. Furthermore, most are mixed feeds. There are

few varieties of raw materials and product quality is poor. The main problem at the present time is the lack of protein feeds. There basically is no industry for production of amino acids, vitamins, trace elements and other feed additives, and it cannot provide compound feeds scientifically to meet the nutritional needs of livestock, poultry and fish. We should, therefore, strive to develop the feed industry and manage it as an important emerging industry. We must also accelerate construction of the feed additive and feed processing industries on the basis of full utilization. At the same time, there should be active development of new protein sources, and we should strive to develop and improve feed processing techniques and equipment, strengthen scientific research on feeds, provide good production, supply and marketing coordination and technical services, gradually establish a complete system for the feed industry in China, and strive to raise the feed industry in China to a new level by the end of this century.

Based on the ideals for development of animal raising by the end of the century, the utilization potential of feed resources and the economic and technical conditions for development of the feed industry in achieving the overall goal of struggle and construction of the feed industry can be divided into two steps. The first step mainly involves laying a good foundation and creating necessary conditions before 1990. The second step over the following 10 years involves perfecting the feed industry to bring the feed industry into a new period of growth.

The plan for 1990 is to increase the proportion of all concentrated feeds accounted for by compound and mixed feeds from the present figure of 10 percent to 40 percent.

The plan for annual output of primary industrial feeds and additives will be 300,000 tons of additive pre-compounded feed in 1990 and 900,000 tons in 2000, 1 million tons of concentrated feed in 1990 and 3 million tons in 2000, about 10,000 tons of methionine in 1990 and about 30,000 tons in 2000, and about 6,000 tons of lysine in 1990 and about 20,000 tons in 2000. There also will be corresponding development of methyl protein, calcium hydrogen phosphate, feed yeast, blood, bone and meat meal and fish meal, all types of trace elements, feed vitamins, anti-coccal agents, mold prevention agents and other pharmaceutical additives to meet the needs of compound feed production.

12539

CSO: 4007/364

NATIONAL

EMPHASIZE FEED INDUSTRY, PROMOTE GRAIN CONVERSION

Beijing NONGYE GONGCHENG [AGRICULTURAL ENGINEERING] in Chinese No 3, 5 Jun 85
pp 2-4

[Article by Li Fuxing [2621 1788 5821] and Zhang Guocheng [1728 0948 1004]]

[Text] The establishment and implementation of production responsibility systems since the 3d Plenum of the 11th CPC Central Committee have led to the specialization and socialization of animal raising throughout China's vast rural areas. Grain output has risen substantially. This has placed corresponding new demands on the feed industry and has provided a rich source of raw materials for its development. Development of animal husbandry has promoted the feed industry, while development of the feed industry has provided an enormous material foundation for animal husbandry and promoted grain conversion into meat, eggs, milk and other animal products. This has led to gradual changes in people's food structures and is adapted to the need for continual improvement of the people's standard of living.

I. Construction of a Matching Feed Industry System

The feed industry is an important factor that determines the scale and rate of development of animal husbandry production. Development of the feed industry first of all must consider construction of a matching feed industry system. A feed industry system includes three component parts. The first is the feed processing industry, which is the main body of the feed industry. It takes the various types of feed raw materials and produces feed products of different specifications, varieties, types and grades according to different feed targets, the different nutritional requirements of livestock, poultry and fish, and the different uses of livestock and poultry products.

The second component is the feed raw material industry, which is the foundation of the feed industry. It deals primarily with the production of protein and various types of feed additives. It uses chemical, fermentation and other processing techniques to produce the raw material for each type of feed.

The third component is the feed machinery industry. It is the pillar of the feed industry and produces the various types of simple machinery and sets of equipment needed for processing, shipping, storage and other purposes in the feed industry. Although a great deal of large and medium-sized feed processing

equipment has been imported and some domestic machine processing plants have changed over to production of a number of feed processing machinery sets of various types, quality and quantity demands still cannot be met at the present time. Equipment such as high-efficiency, wear-resistant, low-energy feed crushing machinery, feed product quality inspection and electronic control equipment and forage grass harvesters, balers and so on require further development. Moreover, they should be adapted to the needs of large, medium and small-scale feed processing plants, and should achieve systemization, interchangeability and standardization as quickly as possible.

China's feed industry is an emerging industry and still is in a preliminary stage. We cannot rigidly apply the current experiences of foreign countries. We must start from reality and from China's feed resource conditions and the current developmental situation in animal husbandry and integrate with our national conditions to use them in accordance with the principle of seeking truth from facts. Animal husbandry in China at present is characterized by scattered, small-scale, primarily household raising. There is a low degree of intensity and protein feed sources are inadequate. For this reason, China's feed industry should integrate the large, medium and small and focus on the medium and small. There should be decentralization as appropriate, raw materials should be obtained locally, processed locally and supplied locally to conserve investments, shipping and expenses. Moreover, the initiative of all areas of society should be mobilized to adopt the principle of integrating the state-run and collective sectors, and there also should be mutual coordination and rational distribution within the state-run sector. Grain, animal husbandry, aquaculture, machinery, commerce, foreign trade, light industry, medical and other departments, for example, should have a division of labor and difference of emphasis, and there should be mutual coordination and cooperation. The division of labor between the state-run sector and rural collectives should be that the state provides more than 17 billion jin of feed grain and 7 billion jin of chaff and bran for processing by the state. Grain retained by rural collectives and by peasant households themselves should be processed in plants set up by the collectives, with the state providing the necessary pre-mixed materials and additives to supplement insufficient nutritional components. Large-scale feed processing plants should be organized and managed by the center in conjunction with provinces and municipalities. Counties, townships and brigades can set up medium and small-scale feed processing plants to produce commodity feeds and process retained materials to form a production and processing system that extends from the center to localities and from the state-run sector to the collectives in order to guarantee supplies of finished feeds and promote the conversion of feed and grain.

II. Development and Utilization of Feed Resources

China has abundant feed resources, but the feed resource industry is extremely weak, to the extent that large amounts of feed resources are not being rationally developed and utilized.

China now has 3.3 billion mu of usable grasslands, 1 billion mu of grassy hillsides and slopes, several hundred million mu of grasslands in forests, 200

million mu of coastal beaches, more than 100 million mu of green manure (most of which is excellent livestock feed), more than 1 billion mu of cultivated land, and a large amount of crop straw, chaff, bran and cake dregs. Currently used feed resources amount to 150 billion jin, including 70.6 billion jin of feed grains, 21.8 billion jin of various types of cake dregs, about 4 billion jin of animal protein that can be used as feed and 10 billion jin of various types of distiller's grains. Other materials that can serve as feed include 1.2 billion jin of shredded beets, 1 billion jin of ground chaff and 700 million jin of sunflower heads. Various type of cake dregs can be used in protein feeds. Every year billions of jin are put into the fields as fertilizer, which actually is quite regrettable. Plants can use only 50 percent of the nitrogen sources in cake dregs used as fertilizer. Utilization of nitrogen sources can reach 90 percent if they first are digested and then used to fertilize fields. Experiments have shown that cotton and paddy rice yields are about 10 percent higher if 100 jin of cotton seed cakes are fed to pigs and then placed as manure on the fields compared with plowing 100 jin of cotton seed cakes directly into the field. Furthermore, the amount of animal products is greater. If half of this 21.8 billion jin of cake dregs could be used as feed, pork output could increase by 1.8 billion jin and the peasants could gain 1.8 billion jin in additional income.

In development and utilization of feed resources and in construction of a feed resource industry, we first of all must focus on energy feeds. Energy feeds like corn, kaoliang, barley and tubers generally make up 70 to 80 percent of compound feeds. China now is using about 35 million tons of grain and 25 million tons of processed grain sideline products for feed each year. More scientific use of this 60 million tons of energy feed and processing into compound feeds could improve results by 20 percent, conserve 12 million tons of energy feeds, and raise an additional 53 million pigs.

Second, we must develop protein resources. The essence of the feed industry involves the use of livestock and poultry to convert feed protein into animal protein. The protein conversion rate using full-value compound feeds still is only 20 to 30 percent. Protein feeds must account for 20 percent of compound feeds. No other feed components can substitute for the protein. It is precisely because of this necessity and non-substitutability, in addition to the shortage of protein resources, that has restricted development of the feed industry and animal husbandry. Based on the developmental stage of the feed industry and the amount of demand for compound feeds, plant protein only accounts for 20 billion jin of the current 150 billion jin of feed, and not all of it is used for feed. Based on a 20 percent protein requirement for compound feeds, the least amount needed would be 30 billion jin of protein feeds. Full utilization of existing resources still would leave a shortage of 10 billion jin. By the year 2000, annual feed output of 120 to 170 million tons would require 48 billion jin in protein feeds. The maximum amount of protein feeds that can be supplied by that time is 31 billion jin.

Waste from aquacultural products can be used to make fish meal, which has a rather high amino acid content. Only 30,000 tons now are being produced, a resource utilization rate of only 50 percent. We must strive to reach 80,000 tons by 1990. Large and medium-scale integrated meat processing plants now

produce 3,000 tons of blood, bone and meat powder each year. The utilization rate is less than one-fourth. We can reach 30,000 tons by 1990 and raise the utilization rate to 90 percent. Moreover, extraction of the sugar and carbon sources, protein, organic acids and other materials from industrial waste water and sludge from such activities as distilling, sugar making, starch, beer, monosodium glutamate, solvents, brewing, cheese, papermaking and other plants and waste water added to the appropriate type of bacteria can produce feed yeast with a protein content three to six times higher than in several primary grains. Potential output could reach 100,000 to 200,000 tons. It now is only a thousand or so tons. Around 40,000 to 50,000 tons of feed with a protein content from 60 to 70 percent can be extracted from the waste water produced by China's leather industry. Development of the coal chemical industry in China will greatly increase production of inexpensive methanol, which can be used to develop methyl proteins. Methyl protein output could reach 50,000 to 100,000 tons by the year 2000.

Feed additive development and production is another important aspect of the feed resource industry. These additives include restricted amino acids, all types of vitamins, trace elements and various types of non-nutritional additives like growth agents, anti-oxidation agents, preservatives, insecticides, antibiotics and so on. These additives and their carriers together account for about 3 percent of compound feeds. Although only small amounts are used, they play an enormous role. They can raise the nutritional value of feeds, provide increased returns to feed and promote livestock growth. One jin of methionine, for example, can conserve 100 jin of feed grain. A methionine plant with an annual capacity of 5,000 tons can raise milk output by 250,000 tons and poultry and meat output by 90,000 tons while conserving 500,000 tons of grain. China now has only one small feed additive plant that produces an incomplete variety of low quality products. It is far from meeting the needs of animal husbandry development. Roughly 42,000 tons of amino acids will be needed to increase national output of compound feeds, a level that cannot be reached until the end of this century. Some 45 million tons of vitamins will be needed. Self-sufficiency will not be possible before 1990. Some 12,000 tons of trace mineral elements will be required, but production capacity differs greatly from demand.

The primary factor restricting development of the feed industry in China still is insufficient feed grain. We now have 35 million tons of feed grains, which is one ton for every 28 people. It is not that feed processing capacity is too slow. Production capacity in existing compound feed plants is 60 times greater than compound feed output at the present time. The main reason is an inadequate supply of subsidiary materials. If we can concentrate our forces to develop the feed industry and supply almost enough protein feeds and various feed additives, compound feed output will increase substantially. Each person now has an average of 70 jin of feed grain at present, and this amount may reach 170 jin by the end of the century. At that time, the total will be 200 billion jin (100 million tons). With the addition of chaff, bran, cake dregs and other subsidiary materials, the figure could reach 150 million tons. If 20 percent of this amount is processed into full-value compound feeds, there would be 30 million tons, and if an additional 60 percent is processed into elementary mixed feeds, the figure would be 90 million tons. Total investments

of around 8.1 billion yuan will be needed in the feed industry by the end of this century. A total of 6 billion yuan will be needed for compound and mixed feed processing plants. Various additive production projects will require 2.1 billion yuan. The annual value of output after all are completed could reach 20 to 40 billion yuan.

III. Produce and Use Compound Feeds, Promote Grain Conversion

The nutritional completeness and rational mixing of compound feeds can satisfy the nutritional requirements of livestock, poultry and fish at different stages of growth with excellent feeding results. Remuneration can increase by 20 to 30 percent compared with feeding a single type of feed. The raising period for pigs generally can be shortened by 1 to 2 months. The egg production rate of layers can increase by 30 percent. Beijing Municipality, for example, consumes 1.5 billion jin of feed each year, and the figure could reach 2 billion this year. If it is processed into compound and mixed feeds, 1.2 to 1.3 billion jin would be sufficient. According to experiments in Shanghai, Jiangsu and other areas, the use of mixed feeds to raise pigs can increase the feed utilization rate by 15 to 20 percent. If China as a whole popularized the use of compound and mixed feeds, then 15 to 20 billion jin of concentrated feeds could be conserved yearly in pig raising alone, which is equivalent to the annual concentrated feed requirements of 30 to 40 million pigs. This is more than double China's current feed processing capacity and is equivalent to more than two-thirds of annual grain imports. The economic benefits are quite obvious. In the past, a supply of 4.8 jin of grain to obtain 1 jin of eggs was insufficient in Beijing Municipality. The figure now has dropped to 3.2 jin of grain, meaning that 2 jin of grain is being used as 3 jin. In the past, each laying hen produced 150 eggs. The figure now is 250. Henan Province's Wenxian County fed a single feed on its pig farms in the past and operated at a loss year after year. They now have converted to compound feeds and have annual profits of more than 100,000 yuan.

China now has one tone of full-value compound feeds per 10,000 people. The figure for mixed feeds still is only one ton for every 167 people. The figure is one ton for every 2 people in America, 3 people in Western Europe and 5 people in Japan. Per capita consumption levels of meat, eggs and milk in China are far below world average levels. Per capita meat consumption in China is 24.6 jin, while the world average is 64 jin. Per capita milk consumption in China is 2.8 jin, while the world average is 208 jin. Per capita consumption of eggs in China is 5 jin, while the world average is 13.2 jin. The main reason is the failure of the feed industry to keep pace, which has restricted the development of animal raising and affected the conversion of feed and grain into meat, eggs and milk. Rich feed resources are not being fully and rationally utilized. We are wasting about one-third of our concentrated feeds compared to nations with developed animal husbandry. In the United States, with its developed animal husbandry, the rate of hogs removed from inventory is 143 percent, and the figure is 185 percent in Japan. Live weights can reach 200 jin after raising them for 6 months. Each jin in increased live weight requires only about 3 jin of feed. The rate of hogs removed from inventory in China has reached 65 percent in recent years, and the raising period usually is 8 to 10 months. One jin of live weight

consumes about 4 jin of concentrate. The feed ratio in chicken raising in China also is higher than in nations with developed animal husbandry. The egg/feed ratio in Beijing Municipality's mechanized chicken ranches is 1:2.80. The figure is 1:2.35 in Japan and 1:2.50 in Canada. Furthermore, feed consumption in China's advanced mechanized chicken ranches is 12 percent higher than in foreign countries.

Grain production in China is now increasing at the rate of 10 to 20 billion jin per year, giving the state the capacity to supply more than 40 million tons of concentrate. According to related studies, China's population will reach 1.2 billion by the end of the century. According to the lowest estimates, meat consumption in China will reach 30 million tons per year. The current figure is only 13.57 million tons. Milk will reach 24 million tons, but is only 1.96 million tons now. Eggs will reach 12 million tons; the current figure is only 2.81 million tons. Production of these animal products will require the consumption of about 120 to 170 million tons of compound feeds. China must develop its feed industry if it is to modernize animal husbandry and achieve quadrupling of the gross value of industrial and agricultural output in China by the end of this century.

IV. Some Proposals

1. Strengthen inter-departmental coordination. The feed industry is an emerging industry. It touches upon many disciplines and many departments, and is closely related to grain, commerce, animal husbandry, aquaculture, farm machinery, light industry, foreign trade, medicine, distilling, food-stuffs and other departments. There must be a unified plan for development of the feed industry and strengthened integration and coordination. Allowing things to take their course cannot be permitted.
2. Strengthen quality management. Development of the feed industry primarily serves the purpose of improving the utilization rate and economic benefits of feed resources and improving the returns to feed. An important measure for increasing returns to feed is to improve product quality through raw materials purchasing, development of mixtures, management science, improvement of equipment and production techniques and other areas. We gradually should achieve greater diversity in product types, quality standardization and more scientific mixing. Local quality standards for each region should be established according to local conditions and should prepare the conditions for formulation of national quality standards.
3. Strengthen research on feeds. The guiding role of scientific research can be employed to emphasize research on feed resource development and utilization, quality standards for livestock and poultry feed mixtures, production and utilization of additives, techniques and equipment for use in feed processing plants of different sizes, and other matters.

12539

CSO: 4007/364

NATIONAL

IMPROVING AGRICULTURAL TRANSPORTATION

Beijing NONGJIHUA FUWU BAO in Chinese 4 Mar 85 p 1

/Commentary: "Let the Transportation Vehicles Used in Agriculture Quickly Become the Main Force For Agriculture Transportation"

/Text/ The importance of agricultural transportation is being recognized by more people. Countries of the world take agricultural transportation very seriously, the Japanese say: "Farm work in the final analysis is transportation work." The USSR believes that after basically realizing agriculture mechanization "the increase in the speed of agricultural mechanization and raising labor productivity along with reduction in production prices are to a large extent decided by the technology level of agricultural transportation." The expanded production of China's high-quality products has resulted in small-town construction and peasant living standards being raised, growth in rural transportation, and has promoted the rapid development of transportation by means of the automobile and the tractor. Agricultural transportation vehicles are like a new force coming to the forefront that cannot be resisted. This is because it suits the actual conditions in rural areas at the present time.

The economical transportation distance for China's rural transportation vehicles is 30 km, but over 80 percent of rural transportation is done within 20 km. The road condition requirements needed by rural transport vehicles are small. China currently has 890,000 km of highway with most being class 3, class 4 or simply built highways. Transportation vehicles used in agriculture are suited to agriculture's current scope of operations, the peasants' purchasing power and the technology level. In addition to this, there is the hidden potential of the agricultural machine industry and advantageous conditions for developing agricultural transportation vehicles. We can bring in foreign investment and advanced technology to carry out technological reform. This has the support and concern of related departments of the State Council and there is great enthusiasm for this undertaking. All of these things have created good conditions for development of agricultural transport vehicles.

The key for the next step is that we should do a good job of analyzing present conditions, and predicting future conditions, of the market. In addition to perfecting and improving the present models, we should as quickly as possible set about developing a second generation of agricultural transport vehicles. Present science and technology and the manufacturing ability of the machine

industry should be fully utilized, coordination among specialized departments and should be organized according to prototype requirements. Large numbers of vehicles should be produced, the vehicles should be good and inexpensive and have a good assortment so that the transportation vehicles used in agriculture can quickly become the main force for agricultural transportation.

12704

CSO: 4007/302

NATIONAL

TRACTOR SALES IN PRC PLUNGE DUE TO CREDIT SQUEEZE

HK080335 Beijing CHINA DAILY in English 8 Aug 85 p 1

[By staff reporter Zhu Ling]

[Text] The boom in sales of farm machinery has suddenly slumped since loans to farmers were cut back in the nation's bid to control credit.

Sales of tractors and harvesters have dropped dramatically since April, and many orders have been cancelled, Gao Ping, a director at the Ministry of the Machine-Building Industry, told CHINA DAILY yesterday.

As a result, stocks of surplus equipment are piling up at agricultural machinery factories.

Gao urged that farmers be made into a special case and be offered appropriate loans by the Agricultural Bank of China to help them buy machinery.

She also said machinery factories should follow market trends and plan production to meet likely demand.

The government has set up a Rural Mechanization Co-ordination Team to investigate the reasons behind the drop in machinery sales.

Two weeks ago, two groups from the Ministry of Agriculture, Animal Husbandry and Fisheries went to the northeast, under the team's auspices, to discover whether the restrictions on agricultural loans, issued by the State Council in April, are causing the slump.

The team, which includes members of the State Council's Rural Development Research Centre, the Ministry of the Machine-Building Industry and the Ministry of Agriculture, is also surveying China's major agricultural provinces of Sichuan, Anhui, Zhejiang, Jiangsu and Hunan.

And later this month, surveys will be carried out in various geographical areas, by the Ministry of the Machine-Building Industry, to ascertain which specific machines farmers want.

Tractors

Since the contract responsibility system was introduced in 1979, farmers have been keen to mechanize to increase production. They have invested more than 30 billion yuan (about \$11 billion) in machinery in that time.

Hu Zhengji, a deputy director of the Ministry of Agriculture's farm machinery department, said that the number of tractors in use in 1984 doubled the previous year to 4.15 million.

Around 75 percent of these were purchased by individual farmers, he said.

Since March, sales of large (over 75 horsepower) have dropped by up to 50 percent, according to Gao Ping.

At the Luoyang No 1 Tractor Plant in Henan Province, the country's largest, 3,988 orders for large Caterpillar tractors were cancelled or postponed by farmers in May and June--23 percent of the plant's contracts.

Last year, the plant turned out 12,000 Caterpillar tractors and only barely met demand.

Loans

The market for small (12-15 horsepower) tractors also plunged in June, after a strong month in May, and more than 11,000 of these tractors are now stockpiled.

Most tractor buyers are individual farmers and 90 percent of them depend on loans to buy large farm machinery. Under the new regulations, an individual buyer must be able to put up 50 percent of the purchase price before he is eligible for a loan.

Last year, the issuance of credit by the Agricultural Bank of China got out of control. The bank issued twice as much credit as it should have. Nationwide, bank lending in 1984 rose 28.9 percent over 1983.

Since January, the government took drastic measures to cut money supplies and to tighten credit.

A Ministry of Agriculture official, Jiang Haihang said: "About 40 percent of the farmers who buy machinery depend on loans, and credit regulations should be shaped accordingly."

However, the ministry expects state control on credit will not be relaxed this year. Gao Ping added that rural areas have been suffering from heavy rains, hailstorms, or drought this year which will hit crop production and reduce farmers' incomes.

CSO: 4020/327

NATIONAL

GROWTH OF AGRICULTURAL MECHANIZATION

Beijing NONGJIHUA FUWU BAO in Chinese 4 Mar 85 p 1

/Article: "Two New Developmental Trends in Agricultural Mechanization, New Conditions in Perfecting the Output-related Responsibility System and Division of Rural Labor and Occupation"

/Text/ Along with improvement of the output-related responsibility system and the rising purchasing power of peasants, and especially the development of rural labor and occupation division and emergence of specialized households, there has also been a rapid increase in family-operated farm machinery. There are two categories of family-operated farm machinery, one is individually owned and operated machinery, the other is collectively owned machinery that is "hired out to individuals." According to incomplete statistics, in combining both categories of family-operated machinery, at the end of last year 90 percent of households (not including various types of farms) had tractors. Adding to this grain-, cotton-, oil- and feed-processing machinery and small irrigation machinery shows that agricultural machinery is operated by families. This change indicates that the management of rural and agricultural machinery has entered a new stage of having state-, collective-, cooperative- and family-operated machinery with the family being the principal machinery operator.

According to analysis of material by the Agricultural Machinery Bureau of the Ministry of Agriculture, Animal Husbandry and Fishery, two new developmental trends have now appeared in agricultural mechanization.

The former contract management of tractors is gradually changing to that of families owning and operating their own. Because there are some problems with collectives hiring out tractors that are not easy to solve, many areas are now selling the tractors to individuals. For example, of the 27,600 caterpillar track tractors that were collectively owned in Heilongjiang Province, 10,000 have now been sold to individuals; 10,000 of its 36,700 wheel type tractors have also been sold to individuals; and 93,000 of the province's 96,000 small tractors have been sold to individuals. The more than 2,000 tractors collectively owned in Zaoyang County of Hubei Province have all been sold to individuals. The methods of sale for these tractors was a one-time set price for some and a 3- to 5-year delayed price for some, which in actuality is purchasing by installments. This trend shows there will be further increases in tractors owned and operated by families.

The other trend that has appeared is specialized households of planting, breeding, processing, service and development using more and more agricultural machinery. Based on analysis of a sample survey conducted in Hubei Province, no matter which trade the specialized households are in, in order to expand the scope of operations and the operation's beneficial results they cannot move away from agricultural machinery. A short time after specialized households are linked up with agricultural machinery there is a marked rise in their economic results. For example, the Yitingquan Beancurd Manufacturing Household of Shiqiao Village in Jingmen City, Hubei Province. This household with a total four workers put out somewhat over 40 jin of beancurd products per day in 1982 using handwork, a daily per person output value of 2 yuan. After changing to a donkey-pulled grinder they produced over 80 jin of products per day, a per person daily output value of 5 yuan. Starting in 1983, they purchased a diesel engine, a grinder and a walking tractor to carry out mechanized processing. With only one person making beancurds, the daily product output was over 160 jin and a daily output value of 14 yuan. Of the remaining three persons, one raised hogs, one opened a shop and one operated the tractor. All the incomes combined equal a daily output value per person of 31.5 yuan. It can be predicted that, along with development of rural specialized households, readjustment of the industrial structure and growing commodity production, there will also be more new requirements for agricultural machinery and the scope of agricultural mechanization will continually expand. This will open up even broader prospects for farm mechanization enterprises, pose new tasks and requirements for agricultural mechanization work, and spur further reform of management work in agricultural mechanization.

12704

CSO: 4007/302

NATIONAL

RENMIN RIBAO ON FISH, SEAFOOD PRODUCTION

OW141027 Beijing XINHUA in English 0900 GMT 14 Aug 85

[Text] Beijing, 14 Aug (XINHUA)--China's output of fish and seafood came to 2.52 million tons in the first half of this year, an 8.3 percent increase on that period of 1984, according to today's PEOPLE'S DAILY.

Freshwater fish output was up 29 percent at 880,000 tons while ocean fish and seafood hit 200,000 tons, a five percent rise.

China has 3.3 million hectares of areas for freshwater breeding, nine percent higher than the same period of last year.

The City of Yancheng, Jiangsu Province, on the Yellow Sea, is one of the leaders in raising fish production. Fish farmers there plan to open up 200,000 hectares of polders, land reclaimed from the sea. Of this, 6,600 hectares will go to fish ponds and is expected to produce 5,000 tons of fish by 1990.

China has two million hectares of polders, but only one-tenth of this land is being used to raise fish and other marine products with production of 600,000 tons annually.

CSO: 4020/327

NATIONAL

BRIEFS

RECORD SUGAR OUTPUT--Beijing, 24 Jul (XINHUA)--China produced a record of 4.31 million tons of sugar in the 1984-1985 refining season. According to the latest statistics released by the Ministry of Light Industry, this was 750,000 tons more than last season. The ministry told Xinhua that a 23.6 percent increase was registered in the output of sugar cane in Guangdong, Guangxi and Fujian provinces, the country's major cane growers. This brought a 30.7 percent increase in the cane sugar output, the ministry added. One of the major factors behind the output rise was government measures to encourage the growers, he said. The use of early-ripening cane strains and plastic filming on a large scale and the application of more phosphate and potash fertilizers constituted the other factors, he added. China's sugar refineries now have a total refining capacity of 5.1 million tons. [Text] [Beijing XINHUA in English 0649 GMT 24 Jul OW]

CSO: 4020/310-F

TRANSPROVINCIAL AFFAIRS

REFORESTATION RESULTS IN INNER MONGOLIA, HEILONGJIANG

OW100900 Beijing XINHUA in English 0826 GMT 10 Aug 85

[Text] Hohhot, 9 Aug (XINHUA)--Good forest management over the past three decades has enabled China's largest forest zone in Inner Mongolian region and Heilongjiang Province to regain its ecological balance.

The Yakeshi forest zone in the great Ningnan Mountains covers an area of 212,000 square kilometers. About half the forest is still primeval. Total timber reserves are 560 million cubic meters.

More than half of the trees have been logged since 1952, supplying over 80 million cubic meters of timber. But logging exceeded reforestation and resources decreased rapidly, affecting the climate and damaging the ecology.

Rational logging along with reforestation began in 1954. Since 1979, when China began economic reforms in the rural areas, reforestation has increased to 30,000 hectares annually. Newly-planted trees are now growing on 500,000 hectares. About 60 percent of the cut-over forest area has been replanted.

According to local officials, trees planted by man grow faster than those which reseed naturally.

The Yakeshi Forest Zone Administration has more than 10,000 forestry technicians, one institute and seven technical schools specializing in the subject.

Over the past two years forest fires have taken a toll of only 0.1 percent. The figure was 1.96 percent in the late 1970's.

CSO: 4020/326

ANHUI

ANHUI AFFORESTATION CAMPAIGN MAKE PROGRESS

OW030332 Beijing XINHUA in English 0247 GMT 3 Aug 85

[Text] Hefei, 3 Aug (XINHUA)--The Anhui provincial authorities have called on the local people to speed up afforestation to increase tree coverage from the present 15.2 percent to 30 percent by the end of the year 2000.

According to Men Fulin, deputy governor and vice-chairman of the provincial afforestation bureau, to achieve this goal, the province, a pace-setter in rural reforms, has allocated 13.4 million yuan for afforestation this year, 10 percent more than last year.

The deputy governor said that as of 30 June this year, trees were planted on 165,300 hectares in rural areas, up 16 percent over the same period last year and fulfilling the annual quota by 60 percent. More than 83,000 hectares of mountains were closed to livestock grazing and fuel gathering to facilitate afforestation, and 565,300 hectares of tree belts were planted, an increase of 33 percent over the same period last year.

The 15 major cities in Anhui have cultivated more than 7,770,000 trees, laid 168,000 square meters of lawns, and planted 820,000 meters of brush fence to combat soil erosion since January this year.

CSO: 4020/310 F

ANHUI

ANHUI OPENS AGRICULTURAL INFORMATION CENTER

OW012038 Beijing XINHUA in English 1454 GMT 1 Aug 85

[Text] Hefei, 1 Aug (XINHUA)--Anhui province set up an agricultural information service center last week.

The center collects, sorts and feeds back production, technical and economic information so the provincial government can make decisions to guide rural production.

It also provides information for prefectural and county departments which help peasants adopt new techniques, readjust production to meet market demand and improve quality of produce.

The center is linked to the rural information service network of the Shanghai economic zone, which includes Jiangsu, Zhejiang, Anhui and Jiangxi provinces and Shanghai.

The province has 2,746 employees working in the information service. In addition, 3,500 peasants and 1,520 rural households help collect and deliver rural data.

Information provided by the service helped Anhui peasants expand the area planted to rapeseed this year and a record harvest of 1.12 million tons was reaped.

The record watermelon crop of 1.5 million tons has supplied 10 nearby provinces and municipalities.

Based on information supplied by the service, local agriculture departments have set up 10 cultivating centers which supply fine strains of wheat, rice, rapeseed, peanuts, tea, and breeding stations for lean pigs and tender chickens.

.O: 4020/310-F

ANHUI

SUBSTANTIAL RISE IN RAPESEED OUTPUT

Hefei ANHUI RIBAO in Chinese 13 Jul 85 p 1

[Article by Kong Xiangying /1313 4382 6601]: "All-around Increase in Province's Rapeseed Production This Year; Gross Output May Be More Than 56 Percent Higher Than Last Year"]

[Text] This year rapeseed output has risen again overall in Anhui Province where both the rapeseed growing area and gross output of rape had declined for 2 consecutive years. The area planted to rape throughout the province reached 12 million mu, and gross output is forecast at 2.227 billion jin, a more than 56 percent increase and an all-time high.

Anhui Province is one of the country's major rapeseed producing areas. Since 1980, this province's gross output of rape has been second only to that of Sichuan Province and has consistently held second place. In 1983, the state readjusted rapeseed procurement prices and instituted limited procurement. For 2 consecutive years thereafter, rapeseed production tended to decline. After the state decided this year not to place a cap on rapeseed procurement, peasant enthusiasm rose again and the area planted to rapeseed increased tremendously. Suxian Prefecture in the Huaibei area planted more than 390,000 mu of rape, more than double the amount planted last year. The growing area for the province as a whole expanded by more than 4 million mu over last year.

Personnel concerned in the Anhui Provincial Agricultural Bureau told the correspondent that agricultural research units in the province are studying the growing of a new variety of rapeseed with a low erucic acid content called No 410, which has been grown this year on a 28,500 mu area, a more than 26,000 mu increase over last year. This will not only help the updating of rapeseed varieties, but will also help to expand the country's exports of rapeseed.

9432
CSO: 4007/409

BEIJING

BEIJING WINNING BATTLE AGAINST DUST STORMS

OW021452 Beijing XINHUA in English 1443 GMT 2 Aug 85

[Text] Beijing, 2 Aug (XINHUA)--Vice-mayor Huang Chao announced here today that the dust storms that used to plague the capital every winter and spring in this dry area of Northern China have been virtually brought under control.

Since 1981, the city has planted 140 million trees in the outlying areas, accounting for 76 percent of the target.

Most of the trees are poplars, which have grown mature enough to fix sand and prevent it from blowing about, he said.

The main sources of the problem are the five areas on the northern and western edges of Beijing, covering 160,000 hectares, where floods from the Yongding, Chaobai and Dasha rivers have left extensive sand and grit deposits.

In the past five years, Beijing has also afforested 151,000 hectares of land in other rural parts of the city, 2.4 times the figure of 1975-1979.

The outskirts now have 297,000 hectares of forests with a coverage rate of 17.6 percent, compared to the 1.3 percent in 1950.

An important factor in the rapid rate of afforestation in the past few years was the contracting of 220,000 hectares of barren hills to peasant families, the vice-mayor said.

The contract system began in 1982. Under the system, land belongs to the collectives and the trees and incomes are distributed according to a proportion stipulated in the contract.

He said the city plans to raise its tree coverage rate on the outskirts to 40 percent by the turn of the century.

CSO: 4020/310-F

BEIJING

MANAGING HOUSEHOLDS SPECIALIZING IN TRANSPORTATION, SALES

Beijing ZHUANYEHUA JINGYING BAO in Chinese 23 Feb 85 p 1

/Commentary: "Concentrate on Relaxing Market Restrictions: Essay No 4 on the 1985 Management Policy of Specialized Households"

/Text/ Transportation and sales are indispensable links in rural commodity production, and have an extremely important effect on promoting the rural economy. During the last few years, households specializing in transportation and sales have broken through many restraints, surprised people with the speed of their development and made contributions for invigorating circulation and developing the rural commodity economy. This year, the rural commodity economy will have even more responsibility on their shoulders, have more freedom and contribute more.

For the upcoming year, households specializing in transportation and sales should be centered on the market and get a grasp on the following several areas.

1. Pay attention to getting correct market information rapidly. The first important point in transportation and sales is understanding the market, mastering changes and not only being aware of the conditions in the production area but also the conditions in the area where the products are sold. We should not only know what the present situation is but also be able to predict future changes. We should gather large amounts of information and be able to distinguish truths from falsehoods. In the unpredictable market, there are many examples of wrong decisions and management failures due to untimely information. Therefore, by fully understanding the market and comprehending changes in laws, we can react smoothly to them and achieve success.

2. Based on needs and capabilities, we can realize these six changes: Change from carrying things with shoulder poles to transporting them by vehicle and boat; change from transportation and sales in small amounts to large quantities; change from transporting and selling one variety to multiple varieties; change from one-way transportation and sale to round trip methods; and change short-distance transportation and sale to long distances. To realize the above goals, transportation and sales by individuals and single families should be changed to transportation and sales by cooperatives. The cooperatives can use different ideas and methods, be flexible and not have to conform to one set procedure. The cooperatives can further advance the aspects of specialization and

socialization in the transportation and sales business, which will result in larger and better economic results. The changes should proceed in an orderly and step-by-step manner. There can be no quick success and instant results; they must be achieved at a planned rate.

3. Take part in safety work. Currently, most areas throughout the country have developed their safety work. In order to prevent accidents and take fewer risks, households specializing in transportation and sales, especially those utilizing vehicles or boats should actively participate in safety work. We can by no means have heavy losses due to minor mistakes.

Households specializing in transportation and sales are an important force in developing rural commodity production. To promote vigorous development of households specializing in transportation and sales, the state and related departments should adopt positive measures, give households the necessary support, and strive now to resolve the problem of households specializing in transportation and sales having difficulty purchasing automobiles.

It can be predicted that during the next year, if we base ourselves on the market and relax restrictions, there is bound to be even greater development of households specializing in transportation and sales.

12704

CSO: 4007/302

BEIJING

IDEAS FOR IMPROVING FORESTRY SPECIALIZED HOUSEHOLDS

Beijing ZHUANYEHUA JINGYING BAO in Chinese 2 Mar 85 p 1

/Commentary: "Article on Forestry Specialized Households Doing a Good Job of Raising Economic Benefits, Essay No 5 on the 1985 Management Policy of Specialized Households"/

/Text/ During the upcoming year, along with reasonable readjustment of the rural industrial structure, the policies for mountain and forest areas will be relaxed, state monopoly purchase will be abolished in forest areas, the timber market will be opened up, and negotiated purchase and marketing will be implemented. Thus, households specializing in forestry will not have to worry about lumber prices being low or forestation not being worthwhile.

However, these new conditions have also put new demands on households specializing in forestry. These demands are that the past concepts of extensive forest farming and of relying on everlasting trees must be changed to stressing science, intensive farming, raising economic results and demoting major efforts to developing the concept of commodity production.

The key is to develop a sense of economic results. Because some households specializing in forestry were lacking technical guidance they did not plant trees that suited the area, such as planting China fir in areas not suited for it, which affected the planting success. Some households did not receive timely news, they planted only one variety of tree and quality was substandard, creating a large overstock of that variety. Some households had no nursery stock so they contracted out the planting of their barren areas, relying on bringing in the needed seedlings from far away. This had an effect on the survival rate and increased the cost of planting. Households specializing in forestry need to avoid blind management; they should, first, based on the varying natural conditions of various areas, formulate scientific techniques and plans. Some households specializing in forestry ask the forestry department for technical guidance or sign technical contracts with forestry stations (tree farms or nurseries), a practice worth encouraging. Second, they should consider forestry's special characteristic of having a long production cycle, integrate work on both the weak and strong points for a diversified economy, and use the weak to support the strong and use sideline products to support forestry. Third, the households should utilize the advantageous conditions of having more timber sideline products, stress the comprehensive use of timber products and

in doing so repeatedly increase the value. Along with this, they should strengthen management overall and continuously raise economic results while also establishing economic relationships with other specialized households, economic cooperative organizations and state-operated enterprises. They should also develop various forms of joint operations and cooperative relationships.

12704

CSO: 4007/302

BEIJING

HOW TO IMPROVE COMMERCIAL SERVICES HOUSEHOLDS

Beijing ZHUANYEHUA JINGYING BAO in Chinese 9 Mar 85 p 1

/Commentary: "Households Specializing in Commercial Services Should Become Skilled in Several 'Masterstrokes': Essay No 6 On the 1985 Management Policy For Specialized Households"/

/Text/ The year 1985 is the one in which commercial services specialized households will give full play to their abilities. After planned quota assignments and planned purchases are abolished for agricultural sideline products and with the rural economy mainly relying on market adjustment, there will be a large expansion of commercial services. After cities open their gates, peasants can open shops and put goods on the market, and service trades will be established to provide various kinds of labor and services. These changes will, on one hand, provide favorable conditions for the development of commercial services specialized households, while, on the other hand, they will intensify the competition that is brought on by the further development of these specialized households. For this reason, commercial services specialized households should work on achieving growth and being prosperous, being successful in competition, becoming skilled in several "masterstrokes," and changing things that were formerly unchanged as needed.

The first "masterstroke": Keep abreast of market trends in order to make prompt and correct decisions. For specialized households to defeat their competitors by unexpected moves, they need to pay attention to market news from various areas. Some specializing households do not study the feelings of the consumer or the changing trends in the demands of society, and since they have their own special goods set at a fair price they are not afraid of being unable to sell them, thus when they fail to sell them the results are monetary losses. Therefore, having timely news is like having a good concept of wealth.

The second "masterstroke": Create high-quality service so their reputation attracts customers. High-quality service always considers the customers interest, and is the most effective type of advertising. But to bring this about is definitely not an easy job, it requires administration to have foresight and sagacity plus the courage and insight of a strategist.

The third "masterstroke": Make small profits but have quick turnover to gain a quick victory. The fast turnover of funds is the basis for making profits. Since most specialized households have limited funds, they need to increase the amount of funds they utilize; there is no other way for them to increase profit.

It needs to be pointed out that at all times and in all countries there has never been a set pattern for managing commercial services. Ingenious utilization depends on being wholeheartedly devoted," this is the way characteristics are individually formed.

12704

CSO: 4007/302

GUANGDONG

GUANGDONG BOOSTS PRODUCTION OF NON-STAPLE FOODS

OW090914 Beijing XINHUA in English 0704 GMT 4 Aug 85

[Text] Guangzhou, 9 Aug (XINHUA)--Peasants in Guangdong Province have greatly boosted production of vegetables and other non-staple foods after it loosened control over their prices earlier this year, a local official said here today.

The supply of fruit, vegetables, poultry, eggs and aquatic products increased considerably this summer compared to the spring and the same period of last year, he said.

Many of the products are high-grade and sold for good prices. Under the past state purchasing system, the peasants were primarily concerned with producing enough quantity to meet the state quotas.

Quangdong designated over 130,000 hectares of low-yield grain fields this year for high-quality rice, vegetables and fruit, and the raising of cattle, pigs and fish, he said.

In Dongguan County, a granary of the province, 30 percent of its 34,000 hectares of paddy fields are devoted to rice strains of high economic value.

The province also paid attention to the development of its 4.13 million hectares of mountain slopes, grassland and polders. It issued a loan of 15 million yuan this year to add to the several million yuan raised by counties and townships to help set up aquatic-product breeding centers. Mountain slopes are being cultivated to grow rubber, coconuts, areca, coffee, pepper and medicinal herbs.

Alongside the increased non-staple food production, rural processing industry is getting underway. Water chestnut powder, canned bamboo shoots and pickled vegetables from the outskirts of Fushan City are in great demand both at home and abroad.

CSO: 4020/326

GUIZHOU

BRIEFS

GUIZHOU GRASSLAND ACREAGE--Guiyang, 12 Jul (XINHUA)--Guizhou Province has completed a grassland survey in 84 counties and cities of the province. According to the results of the survey, total acreage of grassland in the province exceeds 64 million mu, about 24 percent of the total area of the province. The survey was designed to find out the type, distribution, and quality of grassland in the province, as well as how the grassland had been utilized. Survey work began in May 1984 and was completed in June this year. [Summary] [Beijing XINHUA Domestic Service in Chinese 0024 GMT 12 Jul 85 OW]

CSO: 4007/410

HEBEI

FARM MACHINERY SALES CONTINUE UPWARD GROWTH

Beijing NONGJIHUA FUWU BAO in Chinese 4 Mar 85 p 7

/Article by Duan Shaotang /3008 4801 2768/ of the Hebei Machinery Marketing and Supply Co: "In This Year's Farm Machinery Market in Hebei, Buying and Selling Is Still Very Active and Will Possibly Break the Record For Net Sales"/

/Text/ This year, the trend of development in China's farm machinery market has experienced both increases and some decreases. Buying and selling on the market still flourished with the sale indicators of farm machinery showing that an all-time high level could possibly be set this year. This is the conclusion we arrived at after screening, sorting, studying and analyzing survey material and past data from farm machinery companies in 8 prefectures and 81 counties. The following are the results of the analysis.

1. The net sales volume of the farm machinery system provincewide is expected to rise and could set an all-time high.

For the years from 1981 to 1984 the net sales for Hebei's farm machinery system decreased by an average of 21 percent yearly. This year, although there have been increases and decreases in requirements for goods on the farm machinery market, the total value of the increases exceeded the total value of the decreases. In addition, high-quality services were developed by farm machinery companies in various areas, the scope of sales services expanded, there was an increase in assortments and prices rose for products in demand. These things will increase sales. Due to the factors of peasant income increasing and the buying power of society rising, it is estimated that the sales volume of Hebei's farm machinery system will continue to increase this year, and it is hoped they will exceed 1978's all-time high sales volume of 650 million yuan.

2. Sales of large and medium tractors will increase by 43 percent. Although the demand for small tractors will decrease by 3 percent, there will still be a demand for over 40,000 of such small tractors.

With the situation of automobiles being in insufficient supply, the trend of purchasing various types of tractors to develop the rural commodity economy will probably not weaken. But "tractors cannot be driven on expressways and class 1 highways," after this is spread or is enforced, the upsurge in tractor purchases will definitely be affected.

3. The demand for small farm implements is expected to rise. The demand for small-tractor accessories, such as tractor-drawn plows, planters and farm trailers is expected to increase by a large margin over that of last year, with a demand for 16,000 tractor-drawn plows and more than 20,000 farm trailers under 3 tons.

4. Although a large amount of irrigation equipment is owned there is still a fairly large demand for even newer and additional equipment.

Hebei leads the nation in the amount of powered farm irrigation equipment, it has 25 percent more irrigation pumps than it has motor-pumped wells. Nevertheless, this year there was still a demand for more than 30,000 a/c electric motors totaling 10,000 kW; over 100,000 diesel engines under 12 horsepower; and 150,000 water pumps, with the demand for deep-well and submerged pumps increasing by 26 percent over last year.

12704

CSO: 4007/302

HEBEI

BRIEFS

CORN SHORTAGE--This year the areas sown to corn in Hebei have been reduced. It is estimated that the total output of corn in the province will be 15.5 percent less than last year. However, demand is increasing. According to statistics of relevant departments, by 1986 the province will need nearly 12 billion jin, the shortage will be about 1.3 billion jin. At the same time, the number of southern provinces and cities coming to Hebei to purchase corn increases everyday. It is estimated that there will be a great demand for corn this autumn, and the situation is becoming critical. [Text] [Beijing JINGJI RIBAO in Chinese 26 Jul 85 p 3]

HEMP SHORTAGE--For the past few years, hemp production in Hebei has been sharply reduced. Throughout the province the sown area has been reduced from 100,000 mu in 1981 to 10,000 mu last year. Total output has been reduced from 30 million jin to 4.02 million jin. According to the calculations of the forecasting association under the marketing and supply cooperative in Hebei, this year the sown area will remain at about 10,000 mu; total output will be 4.28 million jin for an increase of only 6.4 percent over last year. The marketing and supply cooperative plans to purchase 2.09 million jin an increase of 91 percent over last year; however, supply does not meet demand. [Excerpt] [Beijing NONGMIN RIBAO in Chinese 23 Jul 85 p 2]

CSO: 4007/415

HEILONGJIANG

BRIEFS

HEILONGJIANG SOYBEAN FACTORY--Harbin, 7 Aug (XINHUA)--Building work has started on China's biggest soybean processing plant in Heilongjiang Province, northeast China. The plant on the eastern outskirts of Jiamusi City, will be equipped with imported facilities, and will have an annual processing capacity of 100,000 tons of soybean, a local official said here today. Construction is scheduled to be completed by 1988. It will be attached to the provincial state farm bureau, and will produce 10 products, including refined oil, artificial cream and animal feed, with an expected annual output value of 130 million yuan, and an annual profit of around 20 million yuan. The state farms in the province, with 1,800,000 hectares of land, produces about 1 million tons of soybean a year. [Text] [Beijing XINHUA in English 1457 GMT 7 Aug 85 OW]

CSO: 4020/327

HUNAN

RESTRUCTURING RURAL ECONOMY FOR DOMESTIC, EXTERNAL MARKETS

Beijing NONGYE JISHU JINGJI [ECONOMICS FOR AGRICULTURAL TECHNOLOGY] in Chinese No 5, May 85 pp 31-34

[Article by Luo Guangfu [7482 0342 1788] of the Hunan Province Nanxian County People's Government: "Take Aim at Domestic and Foreign Markets, Readjust Cropping Structures"]

[Text] The Dongting Hu region has 13.32 million mu of cultivated land, equal to 26 percent of the cultivated land in Hunan Province. The northern Hunan lake region historically has been an important grain base area in China. According to statistical information for 1965 to 1981, the state purchased (negotiated purchases) 2.359 billion jin of grain each year from the lake region, equal to 34.6 percent of total provincial purchases. Purely commodity grain accounted for 1.844 billion jin of this amount, equal to 37.3 percent of the provincial total. Moreover, the lake region is the primary region of concentrated cash cropping in Hunan. According to statistical data for 1979 to 1981, it accounted for 96.4 percent of provincial cotton production, 96.4 percent of jute and bluish dogbane, 78.6 percent of ramie, 46.2 percent of silkworm cocoons and 65.4 percent of cane sugar. Quite obviously, the Dongting Hu region with its flat terrain, fertile soil, abundant water sources and warm climate is a valuable piece of land. How to deal correctly with the relationship between grain crops and cash crops and make good readjustments in cropping structures is a key question that is related to the development of production in the lake region, to invigoration of its commodity economy, to accelerating the enrichment of the peasants in the lake region and to achieving quadrupling of agricultural output. This article will use Nanxian County in the central zone of the Dongting Hu region as an example for a brief discussion of the question of readjustment of cropping structures in the lake region.

I

For many years, "eating out of the big common pot" in economic systems and "playing a singles game" (monoculture) in production patterns has kept the peasants of the lake region bound in poverty to their grain fields, carrying a golden bowl when they cannot eat their fill. In 1978, each person in the agricultural population of Nanxian County had an average of 1.4 mu of grain fields, while per capita grain production was 1,206 jin. Only 644 jin per person remained after completing state requisition and purchase tasks and retaining enough seed and feed. Per capita net income, including income from household sideline production, did not reach 100 yuan.

After the 3d Plenum of the 11th CPC Central Committee, rural areas broke out of the fetters of the "big and public" [commune system] and the prohibited zone of "taking grain as the key link," and they began to readjust the internal structure of agriculture. Nanxian County has carried out reforms of cropping structures in recent years in three main areas. The first was to cast off the millstone of flooding and waterlogging by allowing fields to revert to the lake for raising fish. The county took out a total of 30,000 mu of farmland for fish and lotus raising. In combination with transformation and utilization of the original surface water, the amount of surface water used for breeding increased from 36,600 mu in 1978 to 81,200 mu. The second was to apply planning achievements to readjust the distribution of cotton. Based on the principle of "adaptation to local conditions, appropriate centralization," and the model "consumption grain fields, commodity cotton," the county reduced the area not suited to cotton by 46,000 mu. The third was to track market information and expand the planting of cash crops. Nanxian County has readjusted a total of 115,000 mu of grain land in recent years, and has readjusted and expanded cash crops in high demand like jute and bluish dogbane, silkworm cocoons and small quantities of high production value, high income crops like hot peppers, liangru [0404 5423], sugarcane, nursery stock and so on. The county's area planted in cash crops increased from 143,000 mu in 1978 to 258,000 mu, equal to 32.2 percent of the cultivated land. Moreover, in other types of crops, they have striven to expand the growing of rapeseed, with the area in rapeseed increasing from 44,000 mu to 135,000 mu.

Although this sort of readjustment is a preliminary one, the results are especially obvious. 1) In grain production, the implementation of intensive management has increased unit-area yields by an average of 98 jin per mu each year over the past 6 years, while the area planted in grain decreased by 20.4 percent. Total grain output grew by 59 percent. 2) In terms of commodity amounts, the average amount of agricultural and sideline product commodities turned over to the state increased by 188.5 yuan per person between 1978 and 1984, an increase of 209 percent. Grain products accounted for 13.2 percent of the growth in commodity amounts. Breeding products accounted for 15.3 percent and cash crop products for 71.5 percent. 3) Looking at productivity, the value of output from each mu of cultivated land was 238.38 yuan in 1984 (based on constant 1980 prices, as below), an increase of 109.09 yuan or 84.4 percent over 1978. The value of output produced by each agricultural laborer reached 1,271.41 yuan, up by 490.23 yuan or 62.7 percent over 1978. 4) The gross value of agricultural output in 1984 was 263.49 million yuan (not including household sideline and industrial production), up by 99.3 percent over 1978. The value of output in grain crops increased by 43 percent, while cash crops increased 1.9-fold, forestry 6.7-fold, fisheries 2.2-fold, animal husbandry 91 percent and sideline production 22.9-fold. Furthermore, rural industrial production increased 1.2-fold. 5) Looking at peasant incomes, the net percapita income was 392.35 yuan in 1984, up by 293.15 yuan or 2.95-fold over 1978.

Practice has shown us that although there is a contradiction of competition for land between grain production and the diversified economy on the fertile but limited land in the Dongting Hu region, all we need to do is open our field of view, orient toward the market, strive to adapt to local conditions and have

good intensive administration in order to take out some grain fields to develop the diversified economy and thereby open up a path for economic prosperity throughout the Dongting Hu region. The facts have proven that making readjustment of cropping structures the breakthrough point is an essential route for readjustment of the entire structure of agricultural production on the Dongting Hu plain with its shortages of coal and electricity and absence of mines or mountains [for hydropower]. The reason is that cropping is the most basic industry in the rural economy. The amount, variety and quality of cropping products basically determine the amount of flow of agricultural commodities and market competitiveness. Detachment from cropping would remove the basic source of rural commodities.

II

Rural areas as a whole now are in an historical period of "two transformations." Under the crashing waves of large scale rural commodity production, cropping production in the lake region is facing new problems and new contradictions. This urgently requires us to study them earnestly and adopt countermeasures.

The first is the peasants' difficulty in selling grain in the lake region. In the past, the peasants of the region had fields everywhere around the lake and planted paddy rice in every field. The result was that the region met the state's needs but not its own. Now a situation of "difficulty in selling grain" has appeared. Nanxian County, for example, turned over 584 million jin of grain over quota in 6 years besides completing requisition and purchase tasks, 100 million jin more than requisition and purchase tasks over the same period. Grain rations of commune members averaged 850 jin over the 6-year period. The fact that the warehouses are rather full and that transport is difficult means that almost 100 million jin of additional grain remains in the hands of the peasants, who are unable to sell it. Substantial but difficult breakthroughs were achieved in a short period of time by "allowing the people to store grain for the state," relying on the peasants themselves to sell it and converting the grain. If we continue to allow grain fields to remain unchanged, we not only will go against the will of the people and obstruct sustained growth of agricultural production, but we also will violate economic laws and influence readjustments in the structure of agricultural production.

The second is the low benefits from grain production. According to a survey by the Management Division of the Rural Department of the Yiyang Prefecture CPC Committee, the economic incomes of specialized grain households were obviously lower than that of diversified economy specialized households. The production costs of specialized grain households were 22.5 percent higher for cotton, 30.1 percent higher for ramie and 11 percent higher in fish raising. Net value of output per mu for these items was 115.22 yuan, 115.59 yuan and 340.49 yuan lower, respectively. Average net income per worker was 2.26 yuan, 2.50 yuan and 14.16 yuan lower, respectively. For this reason, equal division of responsibility fields is rather common in the lake region and specialized grain households have developed slowly. If we do not guide the peasants who grow grain to concentrate on the household economy, then grain production may fall and there may be a reversal in the situation of "difficulties in selling grain" in the lake region.

The third is the heavy millstone of transformation of low-yielding paddy fields. Nanxian County has 42,000 mu of drought-prone paddy fields and 87,000 mu of easily-waterlogged paddy fields that depend totally on diesel fuel and compete for electricity to sustain low-level paddy rice output. It usually is "half a jin of diesel fuel for one jin of cereal grain" and "income that just exceeds the cost of electricity." The fact that these drought-prone and easily-waterlogged paddy fields are so scattered makes transformation of them difficult and a dead-end route. The easily-waterlogged paddy land in Nanxian County is scattered across 665 small village and peasant groups in 178 villages in 21 townships and towns. They rely solely on engineering measures and increase the electrical power load by 9,323 KW and 816 matching engineering sites. Not only was it hard to gather the capital, but economic results also were less than ideal. Moreover, Nanxian County has 50,000 mu of fall-turned land [fan qiu tian 5064 4428 3944]. The masses work it arduously, but yields of 500 jin per mu are hard to reach. If we abandon the principle of "adaptation to local conditions" and continue to take the old path of "transforming conditions to plant grain," the route will become increasingly narrow.

The fourth is unsatisfactory agricultural products on the market. Looking at grain products, although there is a relative grain surplus in the lake region, any high quality compound feed grains for conversion into meat, eggs and milk basically must be brought in from other provinces. The raw Kaoliang used to brew Nanxian County's famous Nanzhou Daqu liquor is shipped in from Henan and from Xinjiang, more than 1,000 kilometers away. Output of round-grained non-glutinous rice, which sells well in northern provinces, accounts for only 9.5 percent of the county's total output. There is almost no high-quality rice available for export. Products urgently needed on the market like ramie, silkworm cocoons, fruits and fresh fish cover a small area, have low output and a low percentage of marketed products. Livestock and poultry, which have a large market demand and which can convert grain, have not progressed for a long time. By 1984, Nanxian County had developed live pigs to only 0.7 head per person, chicken raising to 3.1 per person and duck raising to 0.9 per person. If we continue this sort of closed agricultural production and only require "evaluation on the scales" while failing to orient toward the market and sales routes, the product advantages cannot become commodity advantages, and it will be difficult to take major steps in commodity production in the lake region.

The fifth is an imbalance in regional crop distributions. Practice over many years has proven that the single grain structure is the crux of the lack of dynamism in China's rural economy. China's national conditions do not permit us to have a single cropping zone. Superficial ideologies and knowledge, however, have forced some regions to be satisfied with consumption levels of "adding rice straw to the paddy, adding peppers to the cooked rice" [low fertilization, limited food]. The result is low land productivity and poor economic results. According to an investigation, cash crops accounted for less than 15 percent of the total area in five townships in Nanxian County in 1983 (the average was 13.5 percent). Five townships had a proportion of more than 25 percent of their area in cash crops (the average was 27.18 percent). Although grain output in the first group was 359 jin per person more than in the latter group, grain yields were 96 jin per mu lower. Added to the 0.2

mu less in cash crop area per capita, the result was that the value of output per mu was 81.93 yuan lower, per capita commodity sales were 108.13 yuan lower, and per capita net incomes were 96.5 yuan lower. If regions with a great deal of land and a small area in cash crops do not readjust industrial structures according to local conditions, they will be ripped asunder in the crashing waves of commodity production.

Moreover, the "danger of three cold spells" (the April cold wave that rots seedlings, the May cold wave that stiffens seedlings, and the September cold wave that makes production difficult) in the lake region and the "three dangers from water" (floodwater, standing water and underground water) remain serious obstructions to stable, high output of dual-cropped rice. A single grain structure is unsuited to the complex and varied cycles of natural disaster. Only by establishing an appropriate and rational cropping structure will it be possible to change the situation of "eating rice when the weather is clear, eating gruel when it rains" in the lake region.

In summary, a solution to the low-level grain surplus in agricultural production in the lake region, the poor economic results, irrational cropping distributions and product structures and other questions are major matters for opening up a new situation in cropping production in the lake region.

III

Determine production principles on the basis of societal demand, arrange production projects to deal with natural, social, economic and technological conditions: This is the core of developing rural commodity production, and it is a prerequisite for readjustment of cropping structures. Concretely speaking, readjustment of cropping structures in the lake region should be carried out in accordance with the four principles of pursuing markets and satisfying consumption, having primary and secondary levels and an ability to advance or retreat, comprehensive balance, and improvement of results.

Based on the above principles, readjustment of cropping structures in the lake region should adhere resolutely to the principle of "assuring no relaxation in grain production, actively developing the diversified economy," and it should adopt countermeasures to integrate "retreating, advancing and stabilizing" for further improvement of the relationship between grain and cash crops.

"Retreating" mainly refers to the removal of easily-waterlogged, drought-prone and easily fall-turned low-yield paddy fields from production to cast off the millstone of low yields and expand the planting of cash crops to improve economic results. The lake region has a total of about 5 million mu of low-yield fields of various types. How much land actually to take out of cultivation should be determined according to the relationship between grain supply and demand. Generally speaking, about one mu of land should be guaranteed for each rural person, including intercropped spring and fall upland grains, meaning that each person could have about 1,500 jin of grain. This can guarantee "having two and increasing two," and there will be grain to sell as well as to eat. Increase the use of grain in foodstuffs and in feeds. Calculated on this basis, the Dongting Hu region as a whole has 2 million mu of grain fields that can be readjusted downward. To prevent major rises and falls in grain

output, apart from good intensive management and continual improvements in yields, when actually reducing the area, about 50 percent of the area should be arranged for planting in easily changed annual crops or surrounded with embankments for fish raising to permit quick readjustment and balance grain markets.

"Advance" refers mainly to the expansion of cash crops suited to production in the lake region and with substantial market demand such as ramie, jute, bluish dogbane, silkworm cocoons, citrus, sugarcane and so on. Ramie is a "hot item" on the international market and has great potential in domestic markets. It is a cash crop that deserves a great developmental effort. Ramie grown in the lake region has the highest yields and best quality in Hunan. At current production levels and market conditions, the value of output is around 1,000 yuan per mu. If it is processed into semi-finished and finished products, the value of output per mu can exceed 1,600 yuan. The counties in the lake region now have 110,000 mu of ramie and can expand the area rapidly to around 700,000 mu.

Jute and bluish dogbane are second only to cotton among leading cash cropping products in the lake region at the present time. Around 250,000 mu are planted in normal years. In dealing with information on declining jute output year after year in primary jute-producing nations in the world and the increased sales of jute bags, carpets and other fiber products, there can be an appropriate expansion in jute and bluish dogbane in the next few years to more than 600,000 mu.

Silk is the "empress" of the natural fibers and is outstanding in the textile market as well. The lake region is a rather good silkworm producing region and there is an area of 500,000 mu suitable for mulberries, including sandbars, beaches and dike bases. Annual mulberry leaf output from a mature mulberry grove can reach 5,000 jin per mu, while silkworm cocoon production can reach 200 jin per mu or more. The lake region has 49,000 mu of mulberry groves at the present time, equal to 46 percent of the mulberry groves in Hunan, and it accounts for 65.7 percent of total silkworm cocoon output. The principle of "joining large tracts, concentrating small tracts" should be adopted to develop sandy soils and river and lake sandbars and beaches. This would allow development to around 300,000 mu in a few years (including 100,000 mu of expanded planting of mulberries on cultivated land) as well as active extension of fish ponds under the mulberries.

Oranges are the "king of fruits" in the lake region. They are an excellent product that sells well nationwide and are liked by young and old alike. Although there is a danger of freezing in northern Hunan's lake region, sheltered sunny areas with a suitable climate or areas around houses and inside courtyards can be selected, as can early-maturing varieties. The adoption of a cultivation program using close-planted dwarf early varieties can make use of the falling temperatures and relative drought and the fairly adequate illumination during the fall to produce beautifully colored, slightly tart oranges. The region has 147,000 mu planted in oranges at the present time and gradually can develop the area to 250,000 mu in the near future.

Although the lake region is not the most suitable area for sugarcane, it does have the advantage of processing in state farm mechanical sugar mills. The region has 11 machine-made sugar mills that have a daily processing capacity of more than 7,500 tons of sugarcane. The region only has 156,000 mu of cane fields, however, which can satisfy only 70 percent of the processing capacity. We should foster a tradition of intensive cultivation among the peasants and expand the area planted in sugarcane by 100,000 mu. There should be joint administration with the sugar mills to make full use of the economic advantages in the lake region.

"Advance" also includes the removal of low marshy paddy land from cultivation to restore the lake for fish raising. Aquatic products are short-line commodities that are in demand at high prices on the market at the present time, and they are one of the lake's region greatest advantages. Removal of land from cultivation for fish raising should adopt a method that integrates "dredging and surrounding." In one area, 500,000 of lake fields that do not have guaranteed harvests can be taken out of cultivation and dredged clear for fish raising. On the other hand, a program of raising field embankments to store water for fish raising and one fish season, one paddy season can be adopted on 300,000 mu of low marshy paddy land that does provide harvests each year but where yields are low.

"Stabilization" refers mainly to stabilization of the area and distribution of cotton. The Dongting Hu region is Hunan's main cotton-producing area, reaching more than 1.9 million mu in 1981. After zoning and readjustment, the area planted in cotton now has been compressed to around 1.5 million mu, and the overall distribution is fairly rational. Although cotton is a long-line product among cash crops and production must be arranged according to state fixed purchase contracts, when considering the latent capacity of the cotton textile industry in Hunan and the prospects for comprehensive utilization of cotton sideline products, apart from conscientious elimination of "helping fields" and a shrinkage in scattered land not suited to cotton, overall stability should be maintained in the current distribution and area of cotton fields in order to prevent a situation in which output exceeds sales and harvests exceed purchases. There should be a universal widening of the distance between cotton rows and extension of interplanting cotton fields with summer harvest grains, oil crops and limited-amount cash crops to increase the benefits from cotton fields. This permits "advance" to focus on cotton output while "retreat" can focus on economic incomes.

The readjustments described above can permit the cropping ratio of grain crops and cash crops in the lake region to change from 8:2 to 6:4, while the ratio between grain crops and the diversified economy (including aquatic breeding) can reach 4:6. Preliminary estimates are that the new cropping structure can lower production costs by about 10 percent, while cash crops as a proportion of the value of output from cropping to surpass 50 percent. Income per mu can be increased by 60 yuan. The diversified economy can approach 70 percent of the total value of agricultural output. If the impetus given to the breeding and processing industries is added, it will be entirely possible to raise per capita net incomes by 100 yuan.

JIANGSU

JIANGSU BUYS MORE SUMMER GRAIN FROM PEASANTS

OW100809 Beijing XINHUA in English 0716 GMT 10 Aug 85

[Text] Nanjing, 10 Aug (XINHUA)--Jiangsu Province, one of China's major grain producers, had purchased 3.3 million tons of summer grain from peasants by 5 August, above the quota contracted with them, a local official said today.

The provincial government purchased 3,082,500 tons of wheat as against the contractual quota of 2.9 million tons. The extra consisted of barley.

The province also purchased 335,500 tons of rapeseed, 70 percent more than last year.

China replaced the compulsory purchase of grain, cotton and other major farm products from peasants with a contract system this year. When contract production quotas are met, peasants can sell their products at market prices.

CSO: 4020/326

JILIN

JILIN PLANS TO EXPLOIT GRAIN, TIMBER, OTHER RESOURCES

HK110155 Beijing CHINA DAILY in English 11 Aug 85 p 2

[CHINA DAILY Editor's note: For two weeks our staff reporter, Lao De, has travelled 80 miles in the northeast province of Jilin with a group of Hong Kong and Macao journalists. The trip covered seven cities and the famous natural reserve in the Changbaishan Mountains and the City of Tumen bordering Korea (end editor's note)]

[By staff reporter Lao De]

[Excerpt] Jilin Province in northeast China is making a concerted effort to draw investments and expertise from abroad and elsewhere in China to fully develop its rich agricultural, mineral and industrial resources.

Governor Gao Deshou said that grain and timber resources are the most ripe for development.

Last year, grain output--mostly corn and soybeans--reached 16.3 million tons, about 6.3 million tons more than the province can consume.

The grain surplus has become a problem for the province. Gao said that help is needed to develop the animal feed and food processing industries.

The excess grain also has stimulated output of meat, eggs and milk. Already, 16 percent of the rural population is engaged in making milk powder and canned foods, but that is still not enough to soak up all the excess supplies.

Timber also is quite abundant in Jilin, which boasts 200,000 acres of primeval forests in the Changbaishan Mountain region. Much of the province's 180,000 square kilometres is well-forested, Gao said.

Because of a backward lumbering industry, much of these resources are not fully exploited. Though high-quality furniture is made elsewhere in China with Jilin lumber, the province has not yet developed its own furniture industry, Gao said. Paper manufacturing also is another ripe opportunity, the governor said.

The provincial governor said that many areas are open for overseas investments, including the auto, farm machinery, electronics and chemical industries; production of fertilizer and pesticides; mining and development of tourist hotels and other recreational facilities.

CSO: 4020/326

NEI MONGGOL

IMPROVED METHODS INCREASE NEI MONGGOL LIVESTOCK

OW110256 Beijing XINHUA in English 0246 GMT 11 Aug 85

[Text] Hohhot, 11 Aug (XINHUA)--The Inner Mongolia Autonomous Region, one of China's five major pastoral areas, reported more than 38 million head of livestock at the end of June, 410,000 more than a year ago.

An official of the regional animal husbandry department told XINHUA today that there was a big increase in the output of wool, milk, dairy products and woolen textiles during the first half of this year.

The official attributed the livestock increase to the contracted job responsibility system, linking reward with effort, improvement of livestock and animal-raising management, and boosting veterinary work.

Inner Mongolia has 86 million hectares of grassland, accounting for one-fourth of the country's natural grazing land.

Many herders have built new houses on their contracted grassland and raise domestic animals on the fenced, improved pasture instead of roaming about in search of pasture as before.

CSO: 4020/326

NINGXIA

GENERAL IMPROVEMENT IN LIVESTOCK PRODUCTION REPORTED

Ningxia NINGXIA RIBAO in Chinese 3 Jul 85 p 1

[Article by Chen Qinghui [7115 3237 6540]: "A Fine Situation of 'Five Increases and One High' Has Come About in the Region's Animal Husbandry Industry; Active Readjustment of Rural Industrial Structure To Make the Peasants Become Rich as Quickly as Possible"]

[Text] In the course of readjusting the structure of rural industry, the party and government at all levels in Ningxia have treated development of the animal husbandry industry as an important action for developing the rural economy and enriching the peasants as quickly as possible. This has heightened the enthusiasm of the peasant masses for raising livestock. Throughout the region today, raising milk cows, sheep and goats, hogs, chickens and rabbits has become exceedingly popular. A fine situation has occurred of "five increases and one high" in both mountainland and flatland livestock production.

1. Marked growth in the raising of large livestock animals: Incomplete statistics show a total of 740,000 head of large livestock animals in the entire region at the present time, a net increase of 64,000 head over the end of 1984 for a 9.4 percent increase. The net increase over the same period in 1984 is 105,000 head, or a 16.5 percent increase. The increase in the number of milk cows has been particularly striking. At the present time, 5,300 milk cows are being raised throughout the region. This is a 39.5 percent increase over the same period in 1984.

2. Marked increase in numbers of sheep and goats. The region has 3.3 million sheep and goats today, a net increase of 610,000 head over the end of 1984, a 22 percent increase. It is a net increase of 380,000 head over the same period in 1984, a 13 percent increase.

3. Marked increase in the number of hogs being raised. The whole region currently has 530,000 head of live hogs, 34,000 more than at the end of 1984 for a 6.9 percent increase. This is 42,000 more than during the same period in 1984 for an 8.6 percent increase.

4. Marked increase in the number of chickens raised. The whole region currently has 4.94 million chickens, 1.16 million more than at the end of 1984 for a 30 percent increase. It has 160,000 more chickens than during the same period in 1984, an increase of 3.4 percent.

5. Marked increase in the raising of rabbits. There are currently 70,000 rabbits in the whole region, double the number at the end of 1984.

6. Animal husbandry economic results have risen remarkably. Accompanying development of animal husbandry production, numerous households specializing in livestock raising practice rapid turnover and fattening for sale. As a result, the commodity rate in animal husbandry industry has become ever higher. Peasant Yang Decheng [2799 1795 2052] of Dachuan Village in Haiyuan County raised 64 sheep, all of them fat and sturdy. In April 1985, he slaughtered two of them with a net weight of 260 jin earning a total of 750 yuan for their meat and wool.

Not only has animal husbandry industry production developed greatly in the region's southern mountains, but development has also been swift in the Yellow River diversion irrigation area. Today, the Yellow River diversion irrigation area has 48 commodity cattle bases, 25 commodity sheep and goat bases, 38 commodity hog bases, 32 commodity chicken production bases, and 9 rabbit raising bases. In addition, large numbers of households specializing in livestock production have come into being all over the landscape. Today there are 987 households raising 10 or more cattle, 1,349 households raising 40 or more hogs, and 5,092 households raising 100 or more chickens. There are also some specialized households raising 100 or more hogs and 1,000 or more chickens.

9432

CSO: 4007/411

NINGXIA

DECLINE IN PORK SALES EXPLORED

Yinchuan NINGXIA RIBAO in Chinese 11 Jul 85 p 2

[Article by Qu Shangji /0575 0794 6060]: "State-owned Business Units Should Have a Hand in Market Regulation and Expansion of Pork Sales"]

[Text] Ever since the liberalization of Ningxia pork market procurement and market prices on 1 April this year, even though pork supplies have been ample, market prices have been stable; however, some new problems have arisen in supply. Statistics show state-owned business units as having purchased 3,975 head of hogs during April, 55.3 percent fewer than during March. Pork sales totaled more than 690,000 jin, a 56.8 percent decline. Sales of prepared pork products totaled 31,400 jin, a 47.3 percent decline. Main reasons for the tremendous decline in the amount of pork sales were as follows:

1. A temporary glut in storage throughout the region, cold storage facilities in all cities and counties being filled beyond capacity. This led to a halt in purchases in Helan and Xiji counties, which caused a tremendous drop in the number of live hogs procured.
2. Fierce market competition. In country fair markets everywhere, the meat sold was fresh, prices were flexible and cheap, and a wide selection was offered. In state-owned food companies, sales practices were stodgy, prices were overly rigid, marketing did not follow customary practices, much frozen meat or fat meat was offered for sale and, in addition, service was wanting. The companies were not competitive.
3. Retail prices for some kinds of prepared pork products had been set excessively high, which was also a principal reason for a drop in the volume of market sales.

In view of existing problems, state-owned meat departments should change their business psychology, actively take part in market regulation, and make the most of their role as principal channels. Every meat store should reject the old habit of "sitting in a shop and selling pork." They should get out of their shops and go into country fair markets and busy shopping areas to set up stalls and sales sites that accommodate the public in the buying of pork. In a situation in which the price of unprocessed pork remains virtually unchanged everywhere, they must sell in a flexible way at different prices for fat and lean meat, fresh and frozen meat, and meat from which bones and skin have been removed. They must improve wholesale operations, and organize collectives and individual business to act as agents or deal in pork.

Follow regular market practices and set prices flexibly: Once assigned procurement quotas for live hogs had been abolished and the autonomous region's control authorities delegated price control authority, food departments in all cities and counties promptly instituted floating prices as market conditions changed, which enlivened business.

Need for a suitable amount of preferential treatment on tax collections. The tax burden on state-owned food unit prepared pork products is excessive today, and this is also one of the reasons for the fixed price being on the high side, which hurts their market competitiveness. It is recommended that tax units provide a suitable amount of preferential treatment, lend support to state-owned food departments in actively launching market regulation and expanding sales, while simultaneously collecting more tax refunds.

In short, now that live hog procurement and marketing has been liberalized and numerous channels of circulation opened, units dealing in pork everywhere should do more investigation and study, promptly acquire data about live hog production and changes in market procurement and marketing, do a good job of forecasting, and do business in a more lively fashion. In addition, it is recommended that units concerned do more about quarantining livestock in country fair markets and inspecting meat products to assure the people's health.

9432

CSO: 4007/409

NINGXIA

IMPROVEMENT OF FARM MECHANIZATION MANAGEMENT URGED

Yinchuan NINGXIA RIBAO in Chinese 9 Jul 85 p 2

[Article by Feng Longjiang [7458 7893 3068], Ningxia Hui Autonomous Region Department of Agriculture: "Do a Good Job of Reforming Farm Mechanization Management"]

[Text] Implementation of preliminary reforms of Ningxia's farm mechanization management has accompanied implementation of rural economic policies and institution of household contract responsibility systems linked to output. As a result the level of mechanization of major operations has risen gradually. The region's grain, oil-bearing crop, and livestock fodder processing has been substantially mechanized, and grain threshing, agricultural transportation, and the sowing of wheat in irrigated areas have been substantially mechanized or semimechanized. In the structure of agricultural productivity, machine (or electric) power does 29.5 percent of the work; in irrigated areas, it does more than 86 percent. Nevertheless, management of farm mechanization in the region is very far from meeting requirements of the new situation in development of the rural commodity economy. Management is not good, and all service work connected with farm mechanization has not kept pace. Unless there is continued reform of farm mechanization management, a rise in economic benefits from farm mechanization and development of rural commodity production will be adversely affected. Acting in accordance with the spirit of CPC Committee Document No 1 of 1985 and the spirit of the recently convened national symposium on reform of farm mechanization management linked to realities in Ningxia, further reforms should be carried out in farm mechanization management and service work.

Ningxia already has an appreciable number of farm machines. As of the end of 1984, total power of farm machines had reached 1,596,000 horsepower. As the rural commodity economy develops, the number of farm machines will continue to increase. For this reason, farm mechanization management tasks are extremely arduous. At the present time, however, the establishment and jurisdiction of farm mechanization management organizations at all levels vary, and everywhere shortcomings exist including weakness, scattered efforts, multiple leaders, and mutual bickering. Most counties have set up a management station, some of which manage, supervise, and promote in a unified way, but others have set up separate units each of which goes its own way. Special cadres for farm mechanization are not specialized. Region, prefecture and municipal farm

machine management institutions likewise are unsuited to and are not helpful in strengthening management, nor are they helpful in providing service. Acting in the spirit of the national symposium on reform of farm mechanization management work, all levels should set up consummately capable special institutions for the management of farm mechanization. Management, teaching, training of staff, scientific techniques, promotion, supply, repair, and checking on safety should be the centralized responsibility of farm mechanization management units, which should insure that all farm mechanization work is coordinated and promote the healthy development of farm mechanization.

A good job of farm mechanization management also entails serious attention to the building of farm mechanization service networks. Work in this regard is a weak link in Ningxia. At the present time, the buildings of some grassroots repair and replacement sites have been taken over by others, and some facilities have been either transferred elsewhere or sold, making repair of machinery difficult for farm machine specialized households and households owning machines. There are few spare parts and diesel fuel supply points, and the guiding of service work for farm machine specialized households has not kept pace. Quite a few mechanized operations required for development of rural commodity production have yet to be developed, and this hurts the production rate, the commodity rate, and improvement in overall economic results. Farm machine management units at all levels should act to take hold of the support provided by Party and government leaders, go down to the grassroots to institute reforms, devote attention to establishing service networks, and operate rural farm management service stations (or companies) as centers for farm mechanization service, and actively pursue comprehensive maintenance and repair, supply, processing and transportation services for compensation. Internally, stations (or companies) should institute economic contract responsibility systems, and "independent accounting with each being responsible for its own profits and losses." Management service stations (or companies) may be of diverse kinds, and the scope of their services should not be limited by rural boundary lines. Grassroots service stations (or companies) should form various kinds of economic entities and diverse kinds of farm mechanization service networks in conjunction with farm machine specialized households and specialized households. They might also operate farm mechanization service enterprises at the county level and above to increase and spread service projects such as repair and consulting, have facilities to take in peasant funds, and operate economic entities of a service nature.

Serious attention should be devoted to the development of intellect and a good job done of training farm mechanization talent. Ningxia has a shortage of farm mechanization management cadres, and the number of farm machinery drivers is seriously insufficient. Uncertified drivers of farm tractors account for more than 40 percent of all drivers, so accidents occur. In view of the current situation, training of farm mechanization management cadres and training of operators should be done as quickly as possible. Training bases should devote attention to consolidation and accelerating construction, and cases in which city or county farm machine schools have been diverted to other purposes or

taken over should be corrected at once. Education and training related to farm machines should focus on the grassroots, and on farm machine specialized households using diverse methods to accomodate the peasants. Attention should also be devoted to improving the teaching pool, gradual provision of teaching facilities, use of many channels to solve the problem of funds for training, and institution of services for pay.

9432

CSO: 4007/411

QINGHAI

BRIEFS

STOCK SURVIVAL RATE--Xining, 13 Jul (XINHUA)--Qinghai, one of Ch'na's five major pastoral areas, bred a record 2.96 million young animals from January to the middle of June, the local animal husbandry office reported today. The survival rate of young animals was 84.4 percent, 10 percent more than in the same period of last year, while the mortality rate of mature animals was 2.48 percent, 1.14 percent (190,000 head) less than in 1984. Since last year, 80 percent of stockbreeding cooperatives in Qinghai have sold their animals and contracted grasslands out to herdsmen's households under the new contract responsibility system. Previously, up to two million mature animals used to die every year and the survival rate of newborn animals was only about 70 percent. [Text] [Beijing XINHUA in English 0906 GMT 13 Jul OW]

CSO: 4020/310-F

SHANGHAI

SHANGHAI PLANS MAJOR WATER POLLUTION CONTROL PROJECT

HK080417 Beijing CHINA DAILY in English 8 Aug 85 p 3

[By staff reporter Su Zhen]

[Text] Shanghai--The municipal government here is resolved to eliminate pollution in Huangpu River and its tributary Suzhou River, the two major sources of drinking water for the country's biggest metropolis, with a population of nine million.

In a bid to provide Shanghai with urgently-needed clean water, a massive project is scheduled to start next year to solve the pollution problem permanently, city officials told CHINA DAILY.

After two years of joint efforts with more than 40 Australian and British water experts, the Shanghai Liquid Waste Management Study Group has now drawn up a final plan for the project costing 1.5 billion yuan (\$540 million).

The project aims to intercept waste flowing into the two rivers and divert it by pipeline for eventual discharge into the Yangtze River Estuary instead.

In its six-point document approving the project, the Shanghai City Government, headed by the newly-elected Mayor Jiang Zeming, emphasized that a solution to the river pollution was crucial to improving public health and the environment for foreign investment.

World Bank

A five-member delegation from the World Bank will come to carry out an appraisal mission on the whole project. The World Bank has agreed to aid the project with \$100 million towards construction.

The average daily influx of waste water amounts to 1.40 million tons in the Suzhou River.

For the massive scheme to work, the municipal government has also demanded close co-operation between the Urban Planning Bureau, Electricity Supply Bureau, Harbour Inspection Station, and Chuanshan County where a large part of the project will be undertaken.

Besides the two badly polluted rivers, the city's only source of clean water--Dainshan Lake--50 kilometres west of the city is now threatened by a sudden growth of tourist and recreation buildings. Most of these buildings have not been equipped with sewage disposal facilities, according to Chen Jiangtao, director of the Shanghai Bureau of Environmental Protection.

A new threat to Shanghai's water supply is the city's new harbour project at Guangang further up the Huangpu River. The project, which includes a 9-berth wharf and a large storage area, will be completed in three years.

"The project will definitely constitute another threat to the city's water supply," Chen said.

Last March Shanghai launched a project to build a new water supply centre upstream along the Huangpu River to improve its deteriorating water quality.

The project, scheduled to be completed in 1986, was made necessary by the serious pollution around the city's present water supply centre downstream, where the Huangpu River receives a daily output of 5.4 million tons from the city's industrial and residential sewers.

CSO: 4020/327

SHANGHAI

BRIEFS

SHANGHAI-ROTTERDAM TECHNICAL COOPERATION--The Shanghai Water Conservancy Bureau recently signed a technical cooperation memorandum with the Rotterdam City Public Project Bureau of the Netherlands. Both sides agreed on technical cooperation in designing an antiwave sluice gate at the mouth of the Suzhou He and other antiflood projects. The Rotterdam City Public Project Bureau will send a water conservancy inspection delegation to Shanghai in October this year. [Summary] [Shanghai City Service in Mandarin 1100 GMT 16 Jul 85 OW]

CSO: 4007/410

SHANDI

COMPREHENSIVE REFORM OF COUNTY-LEVEL ECONOMY DISCUSSED

Taiyuan JINGJI WENTI [PROBLEMS IN ECONOMICS] in Chinese No 10, 25 Oct 84 pp 7-11

[Article by Chen Hanfeng [7115 1383 2800] and Sun Xiyun [1327 0823 0061]: "A Trial Discussion of Comprehensive Reforms of the County-Level Economy: Theoretical Exploration of Yuanping County's Comprehensive Reforms"]

[Text] Eyes from all over Shanxi and the nation at large as well are fixed on Yuanping County's comprehensive reforms. Without a doubt, some theoretical exploration into Yuanping's experience is extremely important. This article is an attempt in this area; and it is hoped that it will draw attention from all sectors toward comprehensive reform of the county-level economy.

I. The Basis and Premise of Reform Is Development of Productive Force

Following on the 3d Plenum of the 11th CPC Central Committee, there have been tremendous achievements in reforming China's rural areas and major changes in the rural scene.

First came the household responsibility system as the major form of production responsibility system for rural agricultural reform. It brought with it a release of productive force, and spurred the development of rural commodity production. This was the first wave of rural reform. All sorts of specialized households cropped up in its wake. China's agriculture began its transformation from the self-sufficient and semi-self-sufficient economy to large-scale commodity production and from traditional toward modernized farming, resulting in the appearance of a second wave in rural reform.

Now, with the development of the rural commodity economy, there has come a gradual concentration of land in the hands of those best able to till it, who have become specialized commodity grain households, while larger numbers of peasants have left the land but not left the countryside. Rather, they have turned to such other economic activities as industry, transportation, commerce, and services. Over 260,000 mu of land in Yuanping was reallocated in February and March of this year. Of this figure, nearly 140,000 mu became concentrated in assignments to 14,000 specialized commodity grain households, while over half of the county's rural labor force no longer worked the land, but took up other sorts of economic activity. This presages that the division of labor in China's rural society is moving further along. Productive force is going to reach new highs, and farming is beginning to transform into even larger scale commodity

production. In other words, the villages have entered a third wave of reform. This new wave will further bolster and develop the emerging rural system of "unification of the whole and the part; and dual-strata operations" (linking of centralized operations with dispersed operations, at the two levels of the household and the collective). This simultaneously activates both the superiority of the cooperative economy and individual enthusiasm.

As Central Committee Document No 1 of 1984 indicated, all state enterprise units located in rural areas, including state-run farms, forests, ranches, fisheries, industrial and mining enterprises, and units engaged in water conservancy and hydroelectricity, prospecting, and propagation of scientific experimentation, must strengthen their interrelations with neighboring peasants. They must work on the principle of mutual benefit, and by providing all sorts of services to meet local farmer demands, promote development of commodity production, strengthen the alliance between industry and agriculture, and bring forth new contributions toward the creation of a renewed socialist countryside. This implies the mobilization and organization of all forces and gradual construction of relatively well-developed commodity production service systems which meet farm demands for technology, funds, supply and sales, storage, manufacturing, transportation, market information, and managerial assistance. With this as a historical background, Yuangping has activated a countrywide rural collective economic organization, and urban state-run and collective industrial and commercial enterprises and institutions. It has come forth with money, land, factories, and personnel--all geared toward the creation of various concrete economic entities (that is, collective "stagings")--which can attract farmers leaving the land to become "player" participants in production operations. Between December of 1983 and June of 1984, 3,081 such concrete economic entities were set up in various lines of business which attracted nearly 48,000 farmers and gave rise to a lively "rivalry between shows."

Marxist commonsense tells us that productive force determines production relationships while the relations of production react upon the forces of production. The economic base determines the superstructure, which also have reacts upon the economic base. From 1956, when China's socialist restructuring was basically in shape, until the 3rd Plenum of the 11th CPC Central Committee, there was a period of over 20 years in which we magnified the reactive effects of production relations and the superstructure and thought in terms of absolutes. As a consequence, the relations of production and the superstructure changed over and over. For example, before a high level of cooperativization in rural production had a chance to set in, the people's communization movement was abruptly initiated. During the "10-year unrest," there was "cutting off the capitalist tail," "following through to the end," and "criticism of legal rights for the capitalist class" (these were actually an attack on the socialist principle of each according to his ability and distribution according to work). All these did serious harm to the development of agricultural productive force.

Yuanping's initial reforms away from the "leftist" methods of the past immediately provided the conditions for peasants to develop their productive force (that is, a staging). Further on, it fully exposed and brought to light the various obstructions encountered in the development of productive forces caused by production relations and the superstructure. Later, reforms in the relations of production and the superstructure were carried out based upon the "problems"

and "barriers" raised by the development of productive force. Moreover, the work was done step by step and a piece at a time. At the present time, the major reforms in production relations and the superstructure have been the following: a breakdown in the rural-urban distinction, and that between industry and agriculture and between the various trades, as well as the development of diverse forms of joint economic operations; an allowance for the dismantling of property limitations and the difference in economic status between public ownership, collective ownership, and individual ownership; allowance for the coexistence of the three forms of ownership within one enterprise; a breakdown in self-contained and inward-looking economic forms with a transition toward a more open model in which people are sought for their ability and the circulation of talent is promoted; use of economic methods to stimulate investment and promote circulation of money, and organization of various forms of investment to create an investment climate with high returns; implementation of the public bid as a method of assignment, which brings about a transformation of some operating units into enterprises and raises the economic return in industrial and commercial enterprises; and implementation of a whole series of reforms favorable to the development of commodity production in those sectors with functional responsibility over economic management. These various reforms in production relations and in superstructure have given a vigorous push to the development of production force and of rural commodity production.

Yuanping's experiences demonstrate that the third wave of rural reform, and the county-level economic reforms which are intimately related to it, must be done with accurate understanding of and control over the laws that production relations must correspond to levels of development of production forces and that the superstructure must correspond to the economic base. Various measures for developing productive forces must be adopted. Reforms must be made in existing regulatory systems for development of production forces which have proved inappropriate. There can be no conceptualizing of a blueprint for reform of production relations and the superstructure which is divorced from reality, nor indiscriminate adoption of a readymade model to meet all situations. It can only be by constant exploration, creation, and gradual perfection with regard to the new problems posed by understanding reality that reforms can be correct.

II. The Tether Linking Rural and Urban Reforms

Whether it be the establishment of agricultural production responsibility systems, primarily in the form of the contract household system, or the development of the various types of rural specialized households, all of China's rural economic reforms since the 3rd Plenum of the 11th CPC Central Committee have taken place basically within the scope of the commune (township). With the issuance of the Central Committee Document No 1 of 1984 and the meeting of the Second Session of the Sixth National People's Congress, the waves of the new tide of rural reform had their first impact on the county-level economy and led to comprehensive reforms of that economy.

The county is where the urban economy joins the rural one, and where the myriad connections between the urban and the rural economy join up. For example, many urban township workers were once farmers; and the city retains its hold on a large contingent of rural contract labor, temporary labor, and exchange labor.

Urban township industry and commerce is primarily in service to the countryside, especially industry, which is geared toward such endeavors as manufacturing from local raw materials, byproduct processing, and farm services (e.g., fertilizer factories, farm machinery factories, and parts and service shops). This determines the fact that county urban economy is actually a joint urban-rural economy.

But the past constraints of locality, industry and property and responses to the needs of the old economic management systems resulted in a manmade chasm between the urban and rural economies. This divorced the county economy from one of its most characteristic features and led to obstacles to the take-off of the county urban economy.

The illogical economic management system of county cities must be washed away by the new tide of rural reform, and the new tide of rural reforms must inevitably be linked to comprehensive county-level reforms. This is because China was for a long time situated in a natural economy of self- and semi-self-sufficiency--especially after communization. The 800-odd million farmers were tied to the land for their food. They had no training in commodity production. As the new tide transformed the rural economy toward even larger scale commodity production, most of these farmers lacked economic ability and methods. They lacked market and technical information. Meeting the needs of commodity production development was difficult. Yuanping's slogan of "the collective as stage and the farmer as player" broke through the rural-urban barrier throughout the county, as well as that separating industry from agriculture and one trade from another. With economic organization by the collective and the assistance of urban state-run and collective-run industrial and commercial enterprises and institutions in linking up farmers to set up various concrete economic entities which were then turned over to the farmers themselves to run, the state, the collective and the individual were brought together and the best of each was brought out. This impelled the development of rural commodity production. Through practice, the problem outlined above was initially resolved.

The county is, in its most complete definition, China's basic socioeconomic and sociopolitical unit, incorporating farming, industry, commerce, finance, culture, science, education, and law enforcement. It incorporates all types of economy and is well equipped both in social organization and in party and government apparatus. For this reason, comprehensive reforms at the county level of economy must be synchronized with a number of managerial systems aspects, including planning, revenue, pricing, material, finance, banking, personnel, wage distribution, and industrial and commercial management. It also involves management systems for science, education and culture, along with institutional facilities for economic management sectors of the party and government apparatus. Yuanping drew the farmers recently released from its land toward its urban townships and attracted solid funds from some wealthy households and specialized householders for investment in industry and commerce. It gave society the main-line byproducts which rural diversified businesses produced, brought together excess rural labor force, and dispersed funds and abundant raw materials to form a real productive force for society and to accelerate development of the county-level economy. Yuanping's comprehensive reforms broke through the fortress of ownership and opened up to rural labor, rural funds and rural talents. Farmers were permitted to enter the cities and form equity partnerships in business, bring shares of business into the factory as workers, and

bid for assignment of contracts from state and collectively run industry and commerce. It permitted the breakdown of barriers between localities, trades and departments, along with autonomous hiring and self-determined wage and incentive disbursement. It permitted jointly operated enterprises to solve problems of supply and sales product direction, and production scale on their own, under the leadership of state planning and in accordance with market conditions. It initiated floating prices on some products and encouraged competition. It made adaptations for reducing or eliminating taxes revenues and requisitions on jointly operated enterprises, and worked to make taxes simple and logical. It simplified industrial and commercial management procedures and expanded the operational scope of jointly operated enterprises. It dismantled the old regulations that goods for shipment outside the province pass through an external trade transshipment point before being shipped out, adopted direct purchase and management methods, and reduced intermediary links. It created new experience in carrying out comprehensive, coordinated and integrated reforms at the single-county level.

Another benefit of comprehensive reform of the county-level economy has been development in the construction of small towns. The latter are the primary market for the exchange of rural and urban commodities. Their existence and development are a necessary condition for the development of rural commodity production and are the road which China's rural areas must follow toward modernization.

The movement of excess labor and funds toward cities between the end of 1983 and June of 1984 through "staging and players" increased the number of enterprises in rural townships alone by more than 800, or 57 percent. This gave the small-township economy unprecedented economic activity, led to rapid development of the construction industries, and brought about a new situation for small township construction.

At the present time, the scope of China's county-level economy is rather small and its impact on the nation's economy as a whole is minimal, as is its impact on provincial and state finances. For this reason, the risks to the state from implementation of reforms in the county-level economy are small. Since this economy was a weak link in the chain of the old economic management system, relatively speaking, reforms come easy. Even with some mistakes and setbacks, the losses should be rather negligible. As China's basic economic and political unit in the fullest interpretation of the word, the county level can serve as a major impetus and have direct referential value for comprehensive reform not only of major urban areas and provinces, but also of the nation as a whole. Reform of large and mid-sized cities--and especially of central cities--has a great influence on macroeconomics and on state finances and revenues. Reforms in the long term, hampered by the severe constraints of the old economic management system, are always difficult, since the power of obstruction it possesses is great. For this reason, reforms nationwide may successfully spread from the countryside to the single-county level, and thence to mid-sized and ultimately to central urban areas. From this it is easy to see that comprehensive economic reforms at the county level are bound to become a bond between rural and urban reform and have a major role in China's economic reforms as a whole.

III. The Impetus of County-Level Reform Toward Macroeconomic Reforms

The county-level economy is a crossing point from the circle of the urban economy to the circle of the rural one. It is an extension of the rural economy to the perimeter of the urban one. The reduplications and overlaps between the special features of the urban and those of the rural economy are especially evident here. Thus, rural economic reforms naturally spread most quickly to the county level. Moreover, comprehensive reform of the county-level economy points the way and provides experience for macroeconomic urban economic reforms.

The success of rural reforms has brought with it a major unleashing of rural productive force and major development of the rural commodity economy. It has also brought with it two problems: excess rural labor force and excess rural capital. For example, at the end of 1983, Yuanping had a labor surplus of more than 30,000, amounting to one-third of the county's labor force. Dispersed rural capital surpassed 20 million yuan. Both excesses required an outlet for investment in production. Moreover, with the implementation of the four-point policy in recent year, some areas expanded the purview of operational management for localities and enterprises, adjusted the proportion between accumulation and consumption, increased worker wages and incentives, allowed localities and enterprises to withhold funds, and increased township worker income across the board. Bank deposits for Yuanping enterprises as of the end of June 1984 reached 21 million yuan. How this money is to be utilized is a complex issue.

With the expansion of the scale of commodity production and intensification of specialization, commodity producers must be given their requisite control over investment and capital accumulation. Interprefectural, interdepartmental, and intersector economic linkups urgently require horizontal connections and movement of construction funds. China's current financial management system are overcentralized and unable to rapidly and comprehensively reflect the increasing vitality of commodity production. The banking adjustment lever is slow in dealing with the vitality of microeconomics and persist in leaving idle large quantities of commodity producer funds (such as those of state-run and collective enterprises, individual industrial and agricultural households, and specialized householders in the villages). New enterprises in industry and mining and newly created businesses, meanwhile, are short of money. Projects within planning, moreover, are often selected in a haphazard way. Industrial cycles are long and construction is slow. Investment return is low and products cannot keep up with market changes. In order to overcome the above-mentioned shortcomings now plaguing financial management systems, we must change the current situation in which credit is concentrated in banks, modes of credit are undiversified, and credit mechanisms are rudimentary and permit the establishment of diversified credit organizations and structures.

Given these objective circumstances, Yuanping set up a system of "limited corporations" in mining and industrial operations issuing stocks throughout the county, which gathered 664,000 yuan of funds which had been dispersed in society, for use on 9 industrial construction projects, increasing profits in the county's industries from 2.93 million yuan in 1983 to what can be reliably predicted to be 5.86 million yuan this year (a doubling of profits). A total

of 3,081 concrete economic entities (that is, "collective stagings") were established in various trades. These were capitalized including fixed assets with 14.05 million yuan (of this figure, contributions from collectives totaled 2.46 million yuan, while those from individuals were 1.46 million and loans totaled 10.13 million yuan). This created a new situation for the rapid development of Yuanping's commodity economy.

Suggestions have been made that this concentration of capital from society has brought with it three problems. First is a drop in bank deposits which makes further issuance of loans difficult and threatens the security of funding for priority construction in the region. Second is China's current shortage of certain materials (especially steel, lumber, concrete, and plate glass).

Thus for a long time even those projects within planning have felt the pinch; and if capital accumulated from society is used to further expand the scale of construction, this may exacerbate the problem of demand for materials, drag out strategic basic construction, and lead to a loss of control. Third is that capital accumulation from society is circumscribed to a small locality and projects are arranged for with only partial interests in mind. This may result in duplicate construction sites and blind construction, increasing the problem of overall balance in the national economy and leading to inordinate waste and losses.

Actually, this is the push which comprehensive county-level reform gives to macroeconomic reform. In the past, when there was no capital accumulation from society, and no concentration of credit in banks, bank deposits naturally went up steadily. But this is not necessarily a totally satisfactory situation, because consumption and investment are limited and the masses hold onto their money and wait to make purchases. Thus being forced to deposit money in the bank (another explanation is that banks rely on increasing interest rates to draw in funds). The consequences could be unimaginable should the national economy--and especially the price of goods--some day begin to fluctuate uncontrollably and this amount of money were to find its way disruptively into the marketplace, given China's lack of development of commodity production and the concurrent shortage of commodities. If this money is directed into developing commodity production and increasing commodity supplies, the problem mentioned above can be avoided. In redirecting these funds into productive investment, credit organizations and institutions among the people engaging in capital accumulation from society can play a role alongside the banks. This may lead to a temporary drop in bank deposits, but as commodity production develops, the material wealth of various types of production enterprises and other types of production will increase. Capital accumulation should pick up in speed and bank credit should undergo extensive expansion. Credit organizations and institutions among the people are a supplement to bank credit and not a replacement for it. For this reason, worries that capital accumulation from society will leave banks with "nothing to do" or that loans will be difficult to find are misplaced.

In addition, with no change in old planning and material management systems in the initial period of capital accumulation from society, such phenomena as disruptions of planning, duplicate construction, blind construction, and exacerbation of supply-and-demand difficulties for goods and materials may occur.

This shows that the old planning and material management systems must be reformed as well. At such time as a high volume of capital accumulated from society is put into development of production, those departments engaged in planning must provide timely information to investors so as to guide this money toward use in short-line production and responsive social service sectors and reduce duplicate or blind construction (of course, such reduplication cannot be absolutely eliminated in any nation at any time). What cannot be employed is the "centralization" technique of the past, in which such funds are "incorporated into planning." Capital accumulations from society should be directed toward those sectors and enterprises with high economic returns. In this way, the state can put more of its funds into mining, energy, transportation, public works, and raw materials industries. The lever of tax revenues can be employed to bring profits in various sectors into line. That is, the laws of pricing and of profit averages should be fully utilized to reform the old planning management system and help develop socialist commodity production. Reforms in the goods and materials management system require further liberalization over and construction of a market in production materials. Such economic levers as tax revenue and loans will stimulate development of industries such as the raw materials industry and increase supplies of production materials. Finally, imports may serve as supplements to meet the demands of commodity production development. However, rigid use of the technique of "centralization" which constrains the development of commodity production can no longer be used. In this way, the three major balances in the national economy--and especially the balance in goods and materials--will not be impossible to attain.

Comprehensive reform of the county-level economy has already suggested some "topics" for macroeconomic reforms, and given impetus and encouragement to such reforms. The appropriate solution to these "topics" should lead to even more rapid development of socialist commodity production and to a "takeoff" for economic construction as a whole.

12303

CSO: 4007/134

SICHUAN

PRICE RISE FOR SILK, IMPROVEMENTS IN SILK INDUSTRY URGED

Chengdu SICHUAN RIBAO in Chinese 13 Jun 85 p 2

[Article by Du Yuxiang /2629 3768 4382/ : "Problems Demanding Prompt Attention in the Province's Silkworm Mulberry Production"]

[Text] The province's silkworm mulberry production has developed rapidly. Cocoon output leaped from 1.03 million dan in 1978 to the 2.04 million dan in 1983. In 1984, cocoon output was 1.97 million dan, a decline from the previous year. We recently conducted a survey in principal silkworm mulberry producing areas where we discovered that quite a few places have fairly large misgivings about further development of silkworm mulberry production, and in some places a situation has arisen in which individual peasants no longer want to raise silkworms. Unless action is taken at once to resolve this situation, it will inevitably bring about further decline in silkworm cocoon output. As a result of limited production of raw silk during the past 2 years, a contradiction has occurred temporarily in which silkworm cocoon supply is greater than demand. However, at the present stage, the province's silkworm cocoon output is unable to satisfy the needs of the province's silk reeling capacity. As the province's silk cloth trade recession changes, there will be a turnaround in silkworm cocoons, and supply will be unable to keep up with demand. This will require that the province's silkworm mulberry production develops steadily. For this reason, we must devote sufficient serious attention to new problems that have arisen in the province's silkworm mulberry production, take vigorous action, and act to solve them in the following several regards:

1. Readjust the price parities between silkworm cocoons and other farm products. In order to narrow the "price scissors" between industrial and agricultural goods, the state has several times raised procurement prices on agricultural products. However, since the amount of price adjustment differed for various agricultural products, the price parities among agricultural products constantly changed. Figured in terms of state procurement prices, in 1979 the extent of price rises for several of the province's major agricultural products were as follows: paddy, 23.2 percent; cotton 21 percent; sugarcane 25.1 percent; rapeseed, 28.5 percent; tangerines, 32.3 percent and silkworm cocoons 20 percent. The price rise for silkworm cocoons was lowest. Not only this, but the government also had preferential policies for farmers growing cotton, paddy, and rape such as extra price subsidies and award sales of chemical fertilizer. Thus, income from the production of silkworm cocoons was somewhat less than real income from the production of other agricultural products.

Statistics from the Jinan County Natural Silk Company show that the amount of rice for which 1 jin of silkworm cocoons could be exchanged was 10.36 jin in 1957, 8.17 jin in 1979 and only 5.6 jin in 1984. At prevailing cocoon prices, earnings on silkworm mulberry from 1 mu of mulberry groves is only a little higher than from the growing of grain and lower than earnings from the growing of cotton, sugarcane, or citrus fruit. What is more, silkworm mulberry production is a labor-intensive industry in which the investment of labor is large and much time required. Peasants used to say, "If you want to get rich, grow mulberry trees." But now some people say, "If you want to get rich, cut down the mulberry trees and plant fruit trees." Consequently, it is necessary to devote earnest efforts to resolve the problem of cocoon prices being too low so as to arouse the enthusiasm of peasants for raising silkworms.

2. Reform of the silkworm cocoon management system. At the present time, the province practices centralized procurement and allocation of silkworm cocoons, the Natural Silk Company being the sole dealer. Since cocoons are allocated without profit, the local treasury derives no benefit whatsoever, and this weakens local enthusiasm for development of silkworm mulberry production. Silkworm mulberry production is largely in the hands of districts and villages, and the silk company acts as an economic entity that has no authority to provide direction to areas or villages, nor can it easily intensify direction of silkworm mulberry production. Consequently, this system must be reformed.

Centralized procurement of silkworm cocoons should be changed to procurement fixed by contracts. Production outside of contracts may be disposed of in free markets by peasants at negotiated prices, prices arrived at on the basis of quality. Peasants should also be able to make sales after processing that increases value on the basis of market demand.

3. Development of specialized silkworm mulberry production at bases. There should be a gradual shift from the growing of silkworm mulberry in scattered locations to centralized locations, concentrating the silkworm mulberry production of the 50 "10,000-dan counties" producing cocoons in the whole province. Within these 50 counties, concerted attention should be given to "1,000-dan districts and townships" for the production of cocoons.

4. Rationalization of the production structure of the province's silk cloth industry. Today, the province's filature capacity is greater than its silk weaving capacity, and its silk weaving capacity is greater than its printing and dyeing capacity. The foundation for after-treatment such as finished processing and multiple processing are even poorer. Objectively, this adversely affects development of silkworm mulberry endeavors. The province's silk reeling firms should bend every effort to increase the colors, styles, and varieties of products, to upgrade product quality and to produce more final products in order to boost development of silkworm mulberry enterprises.

9432

CSO: 4007/409

SICHUAN

STATE RAPESEED PROCUREMENT MOVING ALONG

Accelerate Movement to Warehouses

Chengdu SICHUAN RIBAO in Chinese 10 Jul 85 p 1

[Article by Tao Meizhuan [7118 5019 0278]]

[Text] All jurisdictions in the province have enhanced plan guidance this year and have acted positively to solve specific problems, thereby accelerating the movement of rapeseed into warehouses, and to deal with increased output. As of 25 June, total rapeseed procurement in the whole province was 36.7 percent greater than for the same period in 1984. Chengdu, Neijiang, Leshan, Daxian, Zigong, and Luzhou have already fulfilled state procurement plans.

Governments at all levels have devoted extremely great attention to rapeseed procurement in order to make the most of the province's dominance in rapeseed. They have actively put into effect procurement plans in accordance with pertinent provincial government regulations, have coordinated relations among units and used many ways to raise funds for procurement, and have supported rapeseed procurement. Comrades in charge in the Chengdu municipal government have held meetings devoted to checking on the status of procurement plans and procurement funds, which have given a powerful boost to procurement work. Bazhong County has taken vigorous action for prompt elimination of peasant fears about grain procurement units acting on behalf of others to make deductions from funds payable for their rapeseed, fears about not being paid in cash, and other such misgivings. This very much encouraged peasant enthusiasm for selling their rapeseed to the state.

Grain units everywhere have set up procurement network outlet points and facilities, and have simplified procurement procedures and lengthened procurement hours as a convenience to peasants in selling rapeseed to the state.

Now places that have already fulfilled their state procurement plans are in the process of continuing to make themselves available for the procurement of peasants' surplus rapeseed. Other areas are in the process of further resolving specific problems and striving to fulfill state procurement plans.

State Purchase of All Surplus Rapeseed

Chengdu SICHUAN RIBAO in Chinese 10 Jul 85 p 1

[Text] The province's gross output of rapeseed this year has increased substantially over last year, and movement of the rapeseed into warehouses has also been faster than last year. Some places have already overfulfilled state procurement plans. Now the task that oil-bearing crop procurement units are facing everywhere is to continue efforts, do further good procurement work and fully satisfy peasant demands to sell more rapeseed so as to be able to buy more rapeseed for the state.

Rapeseed is a crop for which Sichuan Province enjoys marked dominance in agricultural production. The province is first in the province in growing area, in gross output and in amount purchased by the state. It holds an extraordinarily important position in the balance of national edible oil revenues and expenditures. In order to keep abreast of the new situation of a marked increase in rapeseed in the province this year and satisfy peasant demands to sell more rapeseed, it holds major significance for making the most of dominance in rapeseed production, in promoting an equitable readjustment of the structure of the farming industry, in improving market supply and in assisting with the needs of fraternal provinces and municipalities.

The rapeseed storage situation in the province has been improved and the contradiction of peasant "difficulty in selling rape" has been gradually ameliorated. This has provided advantageous conditions for greater procurement of rapeseed. The points to be emphasized now are: (1) Being sure to safeguard peasant enthusiasm for selling surplus rape. The job of procuring excess peasant rape must have as its underlying premise suitable arrangements about the amount of rape to remain in rural villages and adherence to the principle of voluntary participation. (2) All units should continue coordination and the raising of funds for procurement, make sure that funds are used for the intended purpose, and assure that peasants are able to receive cash for their sales of surplus rape.

9432
CSO: 4007/409

TIANJIN

BRIEFS

TIANJIN WHEAT HARVEST—Tianjin Municipality has reaped bumper wheat harvest. According to statistics, as of the end of June, the municipality had threshed and dried over 700 million jin of wheat. It is expected that the total wheat output may reach more than 800 million jin when the threshing and drying work is completed. [Summary] [Tianjin City Service in Mandarin 0030 GMT 12 Jul 85 SK]

CSO: 4007/410

XINJIANG

XINJIANG PEASANTS DEVELOPING FISHERY INDUSTRY

OW260852 Beijing XINHUA in English 0840 GMT 26 Jul 85

[XINHUA headline--"Inland Peasants Get Taste for Fish"]

[Text] Urumqi, 25 Jul (XINHUA)--According to local officials, peasants in the Xinjiang Uygur Autonomous Regions--the part of China farthest from the sea--are developing a fishing industry.

More than 180 reservoirs on the Qarqan, Tarim and Yarkant rivers, on the northern, western and eastern sides of the basin, are being used as fish-breeding grounds for local Uygur peasants who rarely ate fish in the past.

One local peasant, Memet Osman, 48, is raising fish on a one-hectare pond in an oasis on the western edge of the Taklimakan desert.

He sold nearly four tons of produce in the first half of this year.

"Now we Moslem Uygurs are able to eat fish regularly in this dry part of the country," he said.

He attributed his success to the encouragement of commodity production in rural areas.

According to local authority statistics, the peasants in the oasis produced 1,700 tons of fish last year, which they sold at the area's 35 fish markets.

A number of varieties of carp and other species from the Yangtze River Valley have been introduced to the basin. Many peasants experienced in fish-raising have travelled from Southern China to help.

In another fish-raising venture, scientists in the region have succeeded in breeding four generations of alpine cold-water species in the Sayram lake, 2,073 meters above sea level, where fish never lived in the past.

According to officials, the lake could now become another important regional fish-raising center.

CSO: 4020/310-F

XIZANG

XIZANG OFFICIAL REPORTS ON RESEARCH INSTITUTES

OW302222 Beijing XINHUA in English 1446 GMT 30 Jul 85

[Text] Lhasa, 30 Jul (XINHUA)--A local official said here today that 18 research institutes, specialising in agriculture, animal husbandry and energy, have been established in the Tibet Autonomous Region.

The institutes have a staff of over 10,000.

In order to raise the grain output of the Yarlung Zangbo, Lhasa and Nyangqu river valleys, key producing areas in Tibet, the Xigaze agricultural science research institute developed a strain of highland barley that gives an average yield of 4.5 tons per hectare, twice that of conventional strains.

Rapeseed is one of the main industrial crops in Tibet. A newly developed strain yielded 3.75 tons of rapeseed per hectare in trial cultivation in the Lhasa valley.

Though Tibet has more than 3,000 hours of sunshine annually, vegetable supply used to be inadequate because of cold temperatures. Scientists have solved the problem by spreading the use of greenhouses and plastic-covered cold frames.

Now all offices, enterprises and army units, and some households, have greenhouses. The area of greenhouses and plastic-covered cold frames has reached 115,000 square meters. Cucumbers, chives, spinach, lettuce and tomatoes are on sale all year round.

Scientists have also bred a type of cattle that produces a high output of beef and milk through hybridization of simmental and local cattle.

The Lhasa white chicken, bred by crossing laihang and local strains, lays 200 to 300 eggs a year, double the yield of local strains. A special farm has been set up on the outskirts of Lhasa to breed the chickens.

CSO: 4020/310-F

XIZANG

BRIEFS

XIZANG GRASSLAND SURVEY--Lhasa, 13 Jul (XINHUA--A group of specialists in vegetation, soil, biology and animal husbandry have started a three-year survey of the 400,000 sq km grasslands in the northern part of the Tibet Autonomous Region. A dozen topics, including flora, soil type and wildlife, will be studied in the survey and a long-term development plan will be worked out on the basis of the results, a local official said here today. No accurate data has ever been recorded for this major area of Tibetan animal husbandry because of high altitude and capricious weather. The survey is sponsored jointly by the Gansu Biological Research Institute, Lanzhou University and Gansu Agricultural University. The group left Lhasa for Nagqu on the northern grasslands Thursday. [Text] [Beijing in English 0912 GMT 13 Jul 85 OW]

CSO: 4020/310-F

YUNNAN

MEETING DISCUSSES SPRING CROP PRODUCTION

HK050615 Kunming Yunnan Provincial Service in Mandarin 2300 GMT 4 Aug 85

[Excerpts] From 26 to 30 July, the provincial agricultural, animal husbandry, and fisheries department held a meeting of directors of prefectural and city agricultural and animal husbandry bureaus in Kunming to seriously sum up successful experiences and make arrangements for spring-harvested crop production for 1986.

The meeting held: Judging by the development of spring-harvested crop production in the province since the founding of the state, it is essential to ensure a certain sown area and output of these crops in order to maintain sustained and steady growth in annual grain output. The province's grain work is more lively and things go much better if output of spring-harvested crops accounts for about 15 percent of the whole year's output of grain and pulses, and what output accounts for over 60 percent of the spring harvest.

The meeting pointed out: Since the 3d Plenary Session of the 11th Central Committee, as the national economy has developed, the province has changed irrationalities in crop cultivation, and gradual readjustments have been made in the sown area, mix, and pattern of the spring-harvested crops. Some of the readjustment was rational and some was not. Some places have gone too far by greatly reducing the multiple-cropping index. We must pay attention to this.

At present the provinces agricultural production conditions are rather poor. Our ability to resist natural disasters remains very weak. In particular, the spring-harvested crops are frequently hit by natural disasters, and there is no definite sown area to serve as a guarantee. It is hard to achieve a big improvement in total output simply by relying on increasing yields.

The meeting stressed: The decline in the spring harvest this year has not only increased the task of the autumn harvest but has also added to the tasks of the 1986 spring harvests. The current grain situation compels us to speed up our pace and restore the spring harvest to the previous record level as quickly as possible, so as to spur the development of the national economy.

Hence, for the spring-harvested crops next year, we must be guided by the principle of promoting diversification without the slightest slackening of grain production, increase the sown area in light of local conditions, strive to improve yields, increase the multiple-cropping index, and raise total output. The sown area of spring-harvested [word indistinct] oil-bearing crops can only be increased, not reduced. Total output must not be below the 1984 level, and we should strive to reach the 1983 level. We must get a good grasp of sowing oil-bearing crops and vegetables, strive to increase the commodity rate, and actively revive green manure production.

CSO: 4007/412

Agrometeorology

AUTHORS: XIAO Sirong [5135 0843 2837]
GUO Kang [6753 1660]

ORG: Institute of Geography, Hebei Academy

TITLE: "Researches on the Indexes of Agricultural Drought and Flood"

SOURCE: Beijing DILI YANJIU [GEOGRAPHICAL RESEARCH] in Chinese No 2,
Jun 85 p 64

ABSTRACT: The authors have established a formula of drought and flood in agrometeorology from the viewpoint of water-balance in farmland, and analyzed the crops require-offering relationship and crops requirement of water (N), at the same period, that is: $K = \{W + R(1 - \sigma - S) + Q\} / N$.

Many parameters of effect have been considered, such as precipitation (R), moistures of soil in the depth of a meter (W), surface runoff (σ), evaporation of underground water and moisture in the deep soil (Q), permeation (S), at the supply of water as the parameters of effect.

As the parameters of effect are different in distinctive region and reasons, the parameter K has different formula of simplifying.

The authors have established the table of drought-water-logging by experience (Table 5) here K is divided into five grades i.e. water-logging, subwater-logging, normal, subdrought and drought.

Finally, both K and the real case are compared, it shows that they are approximate.

CSO: 4011/30

Paleography

AUTHOR: AN Fengtong [1344 7685 2717]
ORG: Institute of Geography, Academia Sinica
TITLE: "Geochemical Characteristics and Paleogeographic Significance of the Quaternary Sediment in the Eastern Part of the Hebei Plain"
SOURCE: Beijing DILI YANJIU [GEOGRAPHICAL RESEARCH] in Chinese No 2, Jun 85 p 35

ABSTRACT: The eastern part of the Hebei plain is located at the mountain apron of the Yan Shan Mts. It is mainly made of accumulated plain of Luanhe, Jiyunhe, Chaobaihe and Yongdinghe. The thickness of Quarternary sediments increases gradually from north to south of the plain and it is 500-600M in the coastal region. This paper is based on the chemical analysis of 15 bore holes from the eastern Hebei plain. After studying the information, it is clear that the geochemical characteristics of the eastern Hebei plain have some connections with paleogeographical environments.

The contents of chemical elements in the Quarternary sediment are respectively Fe_{2.65%}, Mn_{395.4 ppm}, Cu_{27.4 ppm}, Zn _{70.1 ppm}, Ni _{36.1 ppm}, Ca _{2.4 %}, Mg _{1.0 %}, Ti _{0.4 %}, Sr _{185 ppm}, Ba _{556 ppm}, B _{46.3 ppm}, Ga _{18.6 ppm}, V _{100ppm}.

The Mn content of sediment is one time less than that of the earth's crust and B content is three times more than the average content of the earth's crust. The concentration of other elements is as much as the average content of the earth's crust, the chemical elements of Quarternary sediments in the eastern part of the Hebei plain have no great difference. Elemental laws of movement and distribution and accumulation are controlled by various natural conditions.

The natural environment of the eastern Hebei plain underwent a great change in Quarternary geological age. The climate during the Quarternary age had many times transformed from cold to warm. Therefore, the distribution of chemical elements have periodic change. When the weather was warmer and moister and the sea elevated, the contents of chemical elements increased.

CSO: 4011/30

END

END OF

FICHE

DATE FILMED

September 19, 1985